

PCM-F1

*US Model
Canadian Model
AEP Model
UK Model*




DIGITAL AUDIO PROCESSOR


SPECIFICATIONS

| | |
|--------------------------|---|
| Signal system | Conforms to EIA television standard, NTSC color (NTSC system) or Conforms to CCIR television standard, PAL/SECAM color (PAL/SECAM system) |
| Code format | Conforms to the technical specifications of the EIAJ (standard format using 14-bit quantization), or 16-bit quantization format |
| Number of audio channels | 2 channels |
| Sampling frequency | 44,056 Hz (NTSC system) or 44,100 Hz (PAL/SECAM system) |
| Quantization | 14-bit linear quantizing, or 16-bit linear quantizing |
| Frequency response | 10–20,000 Hz ± 0.5 dB |
| Harmonic distortion | Less than 0.007% (14-bit format) Less than 0.005% (16-bit format) |
| Dynamic range | More than 86 dB (14-bit format) More than 90 dB (16-bit format) |
| Channel separation | More than 80 dB |
| Wow and flutter | Below measurable limit |
| Error correction | Error correction and concealment using CRCC and parity |
| Emphasis | Pre-emphasis (in recording): fixed at ON De-emphasis (in playback): automatically switched to ON or OFF (by detecting pre-emphasis identification code) Time-constant: 50 μ sec, 15 μ sec |

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES, LES VUES EXPLOSÉES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

— Continued on page 2 —



SONY®

SERVICE MANUAL

PCM-F1

Inputs

| | Type | Reference input level | Impedance | Minimum input level |
|----------|-------|-----------------------|------------------------------------|---------------------|
| MIC | Phone | — | Accepts low impedance microphones. | 0.435 mV (−65 dB) |
| LINE IN | Phono | −10 dB* | 40 kilohms | 95 mV (−18 dB) |
| VIDEO IN | Phono | 1 Vp-p | 75 ohms | — |

Outputs

| | Type | Reference output level | Load impedance |
|------------|--------------|--|-----------------------------------|
| LINE OUT | Phono | −10 dB** | More than 10 kilohms |
| VIDEO OUT | Phono | 1 Vp-p | 75 ohms |
| COPY OUT | Phono | 1 Vp-p | 75 ohms |
| HEADPHONES | Stereo phone | −24 to −48 dB Attenuation: 5 steps (24, 18, 12, 6 and 0 dB) | Accepts low impedance headphones. |

* Input level when the peak program meters deflect to −15 dB.

** Output level when the playback level is −15 dB as shown by the peak program meters.

General

Power requirements Operating voltage: 12 V dc
 Usable power sources:
 12 V dc with the Sony NP-1 rechargeable battery pack (optional)
 US, Canadian model:
 120 V ac, 60 Hz with the supplied AC-700 ac power adaptor
 AEP model:
 220 V ac (or 240 V ac adjustable by authorized Sony personnel), 50 Hz with the supplied AC-700 ac power adaptor
 UK model:
 240 V ac (or 220 V ac adjustable by authorized Sony personnel), 50 Hz with the supplied AC-700 ac power adaptor
 US, Canadian model:
 12 V car battery with the Sony DCC-2400B car battery cord (optional)
 AEP, UK model:
 12 V car battery with the Sony DCC-2500 car battery cord (optional)

Power consumption 17 watts dc
Dimensions PCM-F1: Approx. 215 × 80 × 305 mm (w/h/d)
 (8½ × 3¼ × 12⅞ inches)
 AC-700: Approx. 107 × 80 × 305 mm (w/h/d)
 (4¼ × 3¼ × 12⅞ inches)
 not including projecting parts and controls
Weight PCM-F1: Approx. 4 kg (8 lbs 13 oz) net
 AC-700: Approx. 3.2 kg (7 lbs 1 oz) net
Total weight Approx. 8.1 kg (17 lbs 14 oz) in shipping carton, including PCM-F1 and AC-700

FEATURES

In conventional analog recording systems, the quality of sound reproduction depends upon the properties of magnetic tape and heads, so that it is virtually impossible to bypass the inherent limitations of conventional analog recording, including its limited dynamic range and frequency response, and its associated distortion.

The Pulse Code Modulation (PCM) system points the way to a new era in sound reproduction. It can offer performance and fidelity far superior to any analog system.

In the PCM system, sound levels are converted to a series of binary codes. This information is recorded as digital pulses of equal amplitude. In playback, all that has to be done is to discriminate between the presence and absence of a pulse. The quality of recording and playback is thus not dependent on the characteristics of tape and heads.

The PCM-F1 is the newest addition to Sony's line of PCM digital audio processors for consumer applications. With the PCM-F1, hi-fi sound reproduction with wide dynamic range, minimal distortion, low wow and flutter (lower than the measurable limit), and flat frequency response is achieved. Listening to the reproduction of your PCM-F1 is just like being in the concert hall.

Compact, lightweight PCM digital audio processor

In conventional digital audio processors, several hundreds of ICs are employed in digital processing circuitry, which makes it difficult to make the unit compact and lightweight.

The three new LSIs for digital processing developed especially for digital audio processor use have successfully made the PCM-F1 compact and lightweight. The A/D (analog-to-digital) and D/A (digital-to-analog) converters, which are newly developed monolithic ICs, are especially adaptable to mass production. This results in the production of a PCM digital audio processor that is more affordable to a greater proportion of audio-philes.

Resolution selector for recording and playback with wider dynamic range and less distortion

The PCM-F1 was developed in accordance with the technical specifications of the Electronic Industries Association of Japan (EIAJ), which has adopted the 14-bit linear quantization format. In addition, the unit has the capability of recording and playing back in accordance with the 16-bit linear quantization format with wider dynamic range and less distortion than the 14-bit format. The 14-bit and 16-bit formats can be selected with the RES (resolution) selector.

Three different power sources

The unit can be operated on three different power sources: house current using the supplied ac power adaptor, optional rechargeable battery pack, and 12 V car battery using an optional car battery cord. When this compact, lightweight PCM-F1 is combined with the Sony SL-2000 or Sony SL-F1 series portable video cassette recorder, you can make a live field recording with wide dynamic range, minimal distortion, and flat frequency response.

Stable power supply

Two dc-to-dc converters incorporated in the unit—one (± 5 V) for the digital circuitry and the other (± 15 V) for the analog circuitry—assure stable power supply.

Easy tracking adjustment of video heads

Correct tracking adjustment of the video heads can be easily performed by observing a meter.

Muting switch for continuous sound reproduction

With the MUTING switch set to OFF, the reproduced sound is not cut off even if many dropouts occur, or if the tape is not being transported at the proper playback speed.

Record muting function allows you to easily insert a blank space between selections.

Multi-generation digital-to-digital tape copy can be performed with absolutely no deterioration in signal quality.

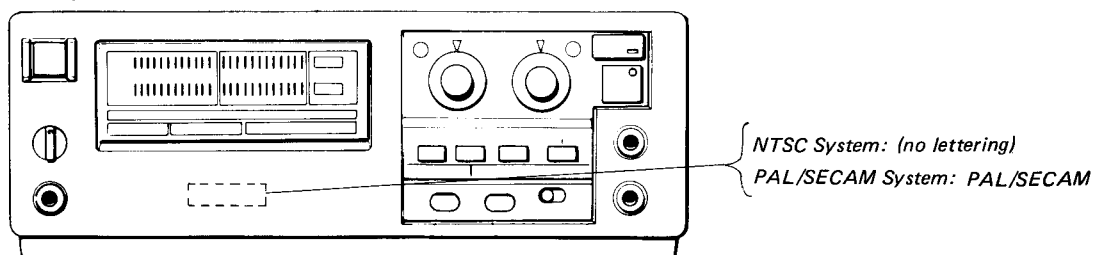
With the highly perfected error detection and correction circuits incorporated, the reproduced sound quality is not affected by dropout errors.

You can choose either of two ways to have the peak level indicated on the LED peak program meters.

Microphone head amplifiers are incorporated for recording directly from microphones and provide excellent sound quality.

SIGNAL SYSTEM IDENTIFICATION

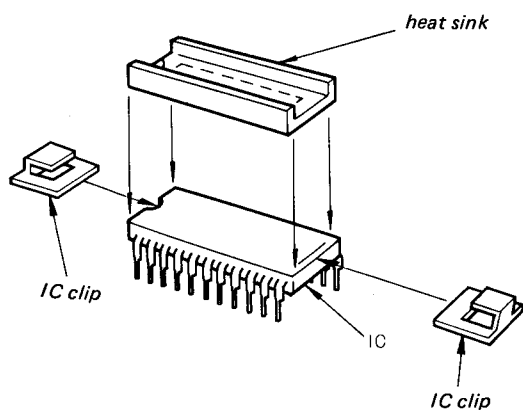
Front panel



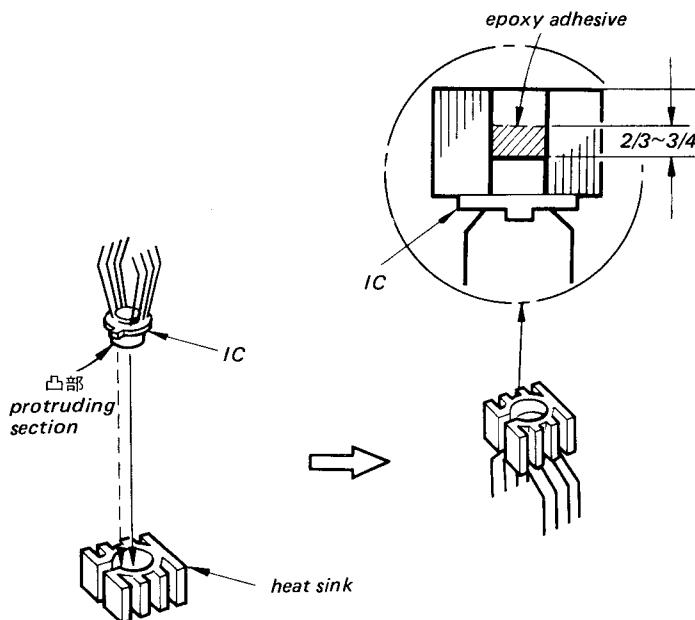
SERVICING NOTE

Notes on IC, Transistor Replacement

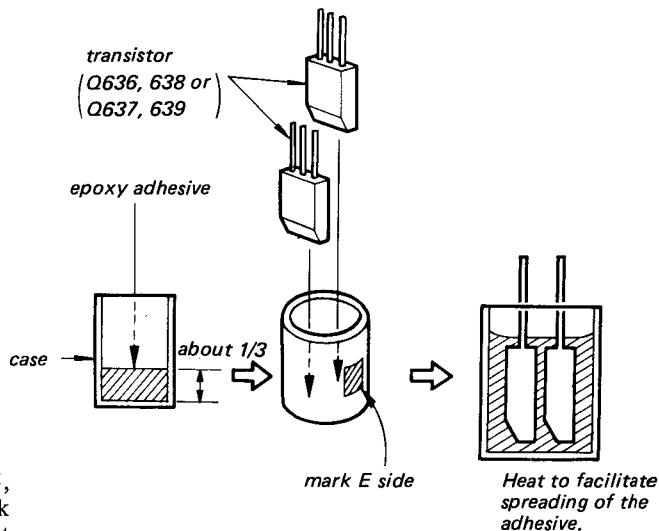
●When replacing IC104, 204, 304, 505, first clean the top of the IC and the bottom of the heat sink with alcohol, then apply an epoxy type adhesive* to the heat sink with IC clip, as shown in the illustration below.



●When replacing IC102, 103, 105, 108, 202, 203, 205, 208, first clean the IC head and the inside of the heat sink with alcohol, then mount the heat sink and fill the heat sink indented portion with an epoxy type adhesive*, as shown in the illustration below.

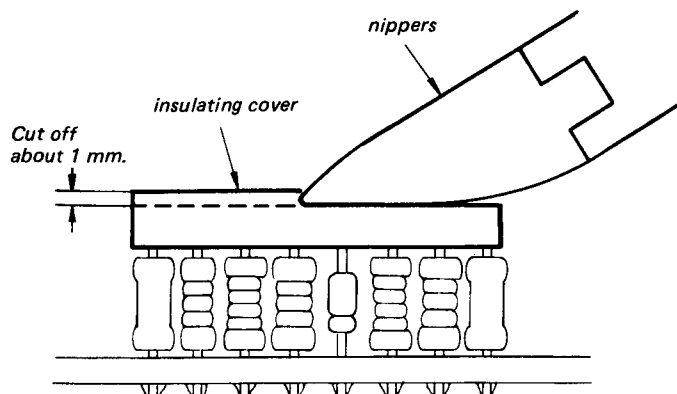


●When replacing Q636, 638, Q637, 639, fill the case as shown in the diagram with an epoxy type adhesive* and insert the transistor.

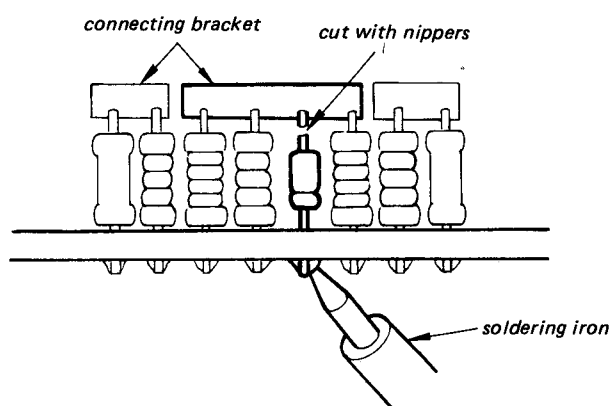
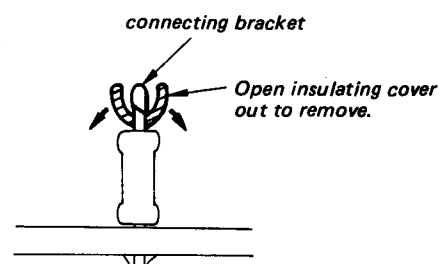


* Epoxy type adhesive: Sony bond SC1000 or other quick drying 2 liquid compound.

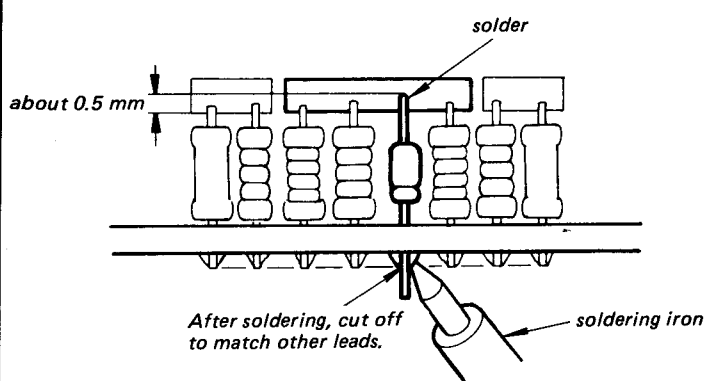
REPAIR METHOD FOR HYBRID CIRCUIT BLOCK



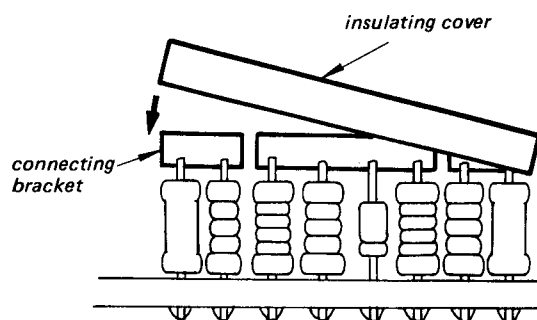
Using nippers, cut off the upper portion of the insulating cover about 1 mm, exposing the top of the connecting brackets.



Cut off the lead of the defective part with nippers. Remove solder and take out the defective part.

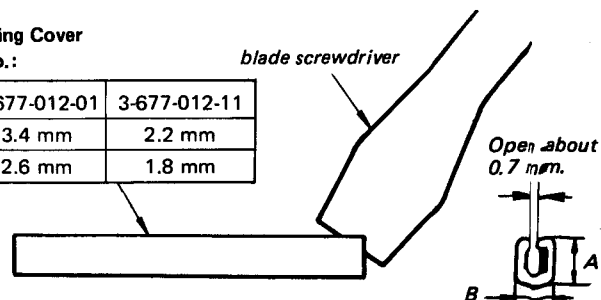


Insert the new part on the board and solder the lead to the board. Cut off the lead on the connecting bracket side so that it overlaps by about 0.5 mm, and solder to the connecting bracket.



Insulating Cover
Part No.:

| | 3-677-012-01 | 3-677-012-11 |
|---|--------------|--------------|
| A | 3.4 mm | 2.2 mm |
| B | 2.6 mm | 1.8 mm |

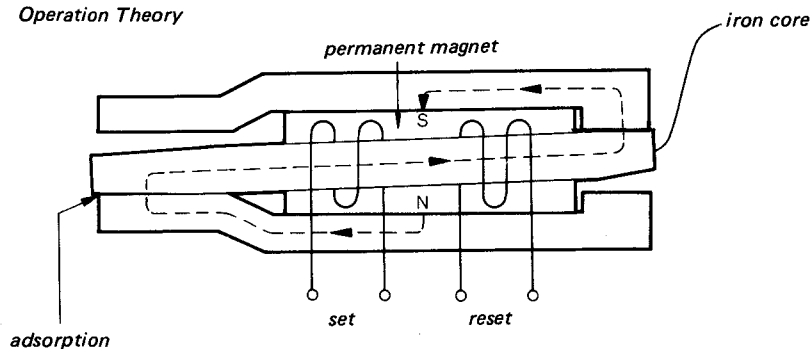


Latching Type Relay

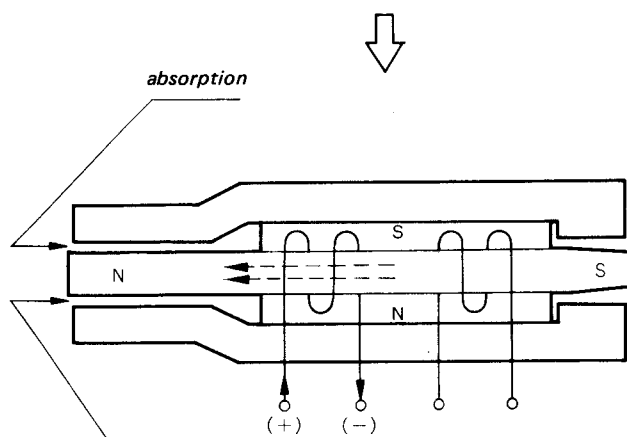
RL301, 601, 602 use a latching type relay. This relay has two exciting coils, set and reset, and a permanent magnet, so by exciting each coil momentarily, set or reset state is maintained.

A normal relay (hinge type) is driven only by the coil magnetomotive force, whereas the latching type relay uses the permanent magnet energy, resulting in low energy consumption and excellent anti-vibration and anti-shock characteristics.

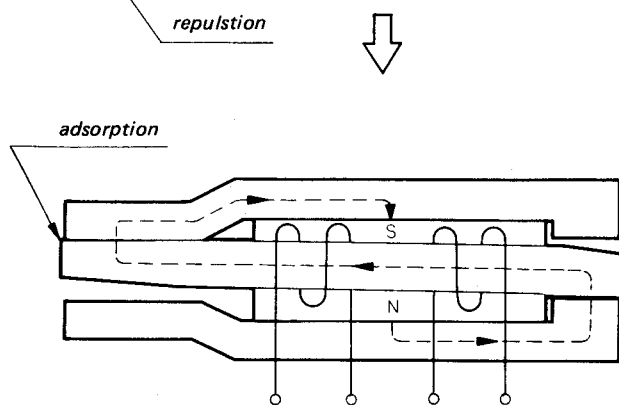
Operation Theory



Reset state is shown. The iron core adsorbs in order to form the permanent magnet magnetic circuit.



Set coil excited. Iron core operates by electromagnetic force.



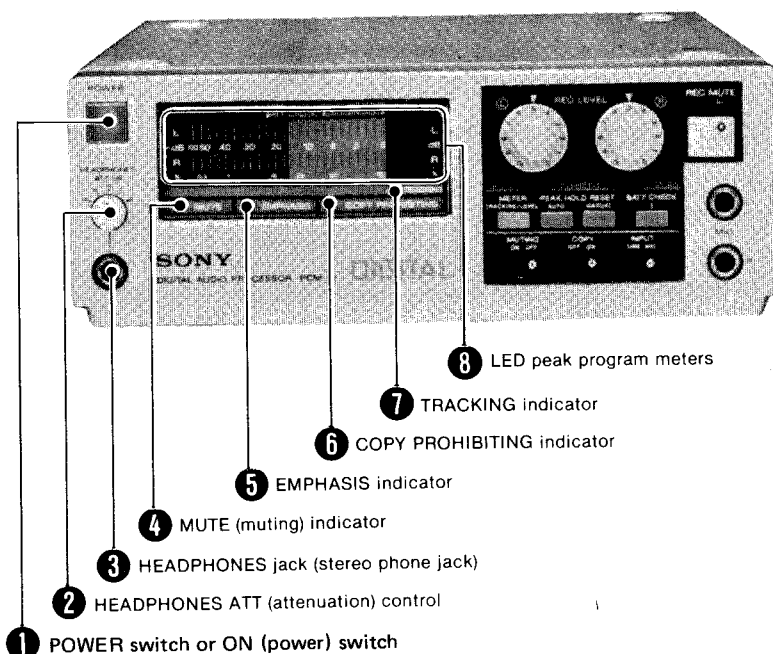
Set state is shown. The permanent magnet magnetic circuit is formed again, and iron core is adsorbed.

SECTION 1 OUTLINE

LOCATION AND FUNCTION OF CONTROLS

Before plugging in or attempting to operate the unit, we suggest that you familiarize yourself with all its switches and controls. Each number in the photo is keyed to the descriptive text.

FRONT PANEL



❶ POWER switch or ON (power) switch

Press to turn on the power. The LED peak program meters will illuminate. To turn the power off, press the switch again.

❷ HEADPHONES ATT (attenuation) control

This control adjusts the volume at the headphones. At the "0" position, the rated output is obtained. When this control is set to the "6" position, the level is reduced by 6 dB, and by setting it to "12", "18" or "24", the level is reduced by that amount of decibels from the rated output obtained at the "0" position.

❸ HEADPHONES jack (stereo phone jack)

Headphones may be inserted either to monitor the input signals to be recorded or to listen to a recording in the playback mode.

❹ MUTE (muting) indicator

If the video cassette recorder is not transporting tape at the proper playback speed (for example, when the tape first begins to move), or if many dropouts occur, this indicator will light up. When the indicator lights up with the MUTING switch set to ON, the muting circuit will activate.

❺ EMPHASIS indicator

When recording and playback are made with this unit, the emphasis circuit incorporated in the unit activates during recording (pre-emphasis) and playback (de-emphasis) and the EMPHASIS indicator illuminates.

When a tape recorded without pre-emphasis with a PCM digital audio processor other than this unit is played back with this unit, the EMPHASIS indicator will not illuminate.

❻ COPY PROHIBITING indicator

When a tape with a tape copy prohibiting code is played back, this indicator will light up to show that a digital tape copy cannot be made.

❼ TRACKING indicator

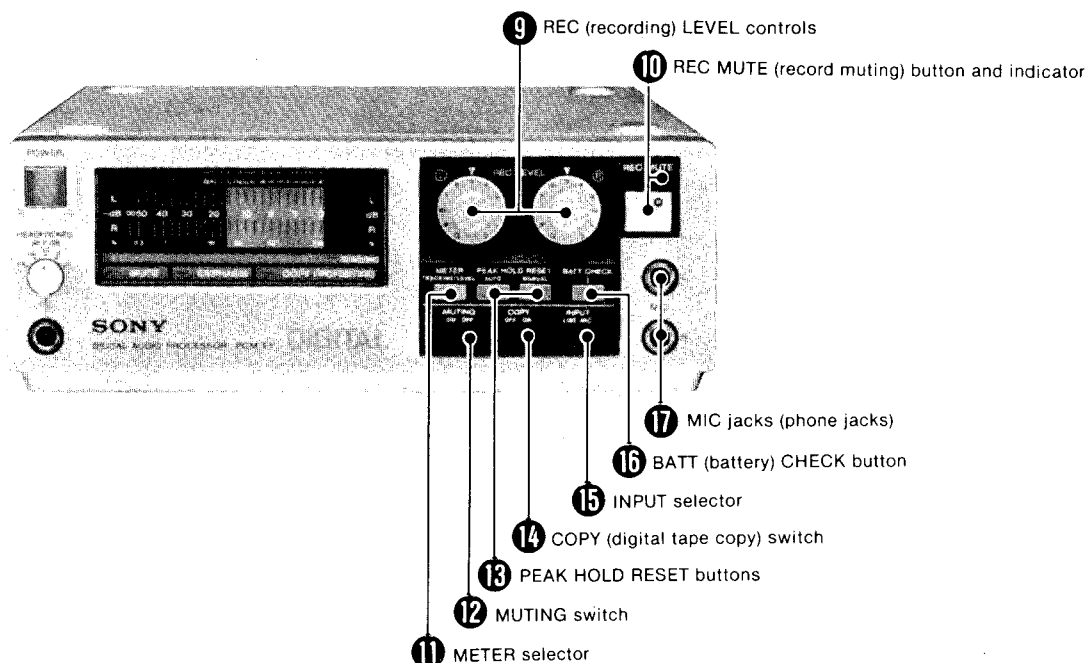
When you press the METER selector, the lower LED peak program meter will be changed to a tracking meter, and the TRACKING indicator will light up.

❽ LED peak program meters

These meters show the peak input level of each channel during recording, and the recorded level during playback. They follow the transient peaks of high-level inputs that are too brief to be followed by conventional VU meters so that the optimum recording level can be accurately set. For easy reading, the meters hold the highest peak while indicating the varying levels lower than the peak.

While the BATT CHECK button is kept depressed, the upper meter for the left (L) channel shows the battery pack condition.

When the METER selector is pressed, the lower meter for the right (R) channel shows the tracking condition of the video cassette recorder.



9 REC (recording) LEVEL controls

These controls adjust the recording level. The left knob is for the left channel and the right knob for the right channel.

10 REC MUTE (record muting) button and indicator

Keep this button depressed to eliminate unwanted material and to insert a blank space during recording. While the button is kept depressed, the REC MUTE indicator will illuminate.

11 METER selector

Press to turn the LED peak program meters into a tracking meter. Each time the selector is pressed, the function of the meter will change.

12 MUTING switch

Normally set this switch to ON.

If the video cassette recorder is not transporting tape at the proper playback speed, or if many dropouts occur due to the mistracking of the video heads of the video cassette recorder, or due to scratches and dusts on the magnetic tape, the muting circuit will activate and the reproduced sound will be cut off.

If you do not want the reproduced sound to be cut off by the muting circuit, set the switch to OFF.

13 PEAK HOLD RESET buttons

You can choose either of two ways to have the peak level indicated: **When the AUTO button is pressed**, successive peaks are held for about 1.7 seconds, except when a higher peak occurs before 1.7 seconds have passed, in which case that peak is immediately indicated. **When the power is first turned on**, the AUTO peak indication mode will automatically operate.

When the MANUAL button is pressed, the peak level will be held on the scale until a higher peak occurs, and that peak will be held. To reset the peak held on the meter, just press this button. You will find this method of indicating the peak input useful when you want to know the highest peak of a tape or disc, or when you want to know both the highest peak as well as the intermittent input levels during live recording.

14 COPY (digital tape copy) switch

Set this switch to ON for digital-to-digital tape copy, with absolutely no deterioration in signal quality, using a pair of video cassette recorders and the COPY OUT jack at the rear.

Be sure to set this switch to OFF except during digital tape copy. With this switch set at the ON position, no signal is obtained at the VIDEO OUT jack.

15 INPUT selector

LINE: to record through the LINE IN jacks at the rear.

MIC: to record through the MIC jacks.

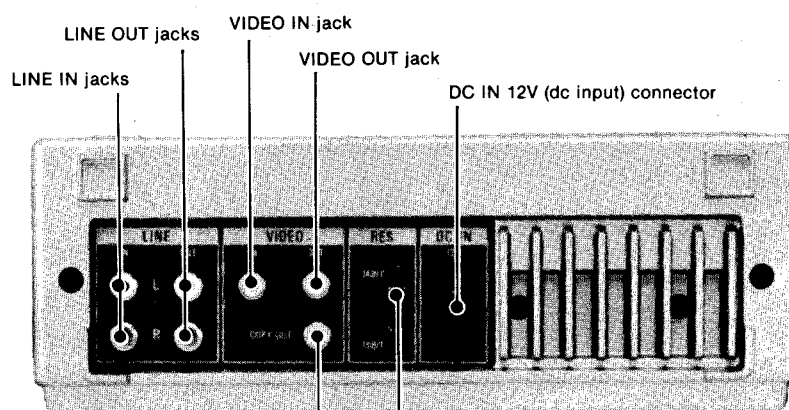
16 BATT (battery) CHECK button

While this button is kept depressed, the upper meter shows the battery pack condition.

17 MIC jacks (phone jacks)

Any low-impedance microphone equipped with a phone plug may be used. If your microphone is equipped with a mini plug, you will need a plug adaptor.

REAR PANEL

**COPY OUT (tape copy output) jack**

To perform digital-to-digital tape copy, connect this jack with the video input jack of the video cassette recorder for recording so that when the COPY switch is set to ON, playback signals in which errors are corrected and/or concealed are obtained.

Be sure not to use this jack except during digital tape copy. Normal recording and playback cannot be performed using this jack.

RES (resolution) selector

Selects the resolution for recording.

14 BIT: for recording in accordance with the technical specifications of the Electronic Industries Association of Japan (EIAJ) which has adopted the 14-bit linear quantization format.

Set the selector to this position when the tape recorded with this unit is to be played back using another PCM digital audio processor which conforms to the 14-bit quantization format of the EIAJ.

16 BIT: for recording and playing back using this unit with a wider dynamic range and less distortion.

Normally set the selector to this position.

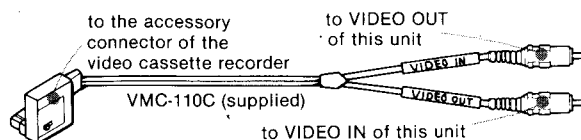
During playback, it is not necessary to select the position of this selector, since the 14-bit or 16-bit format used for recording is automatically selected.

SYSTEM CONNECTIONS

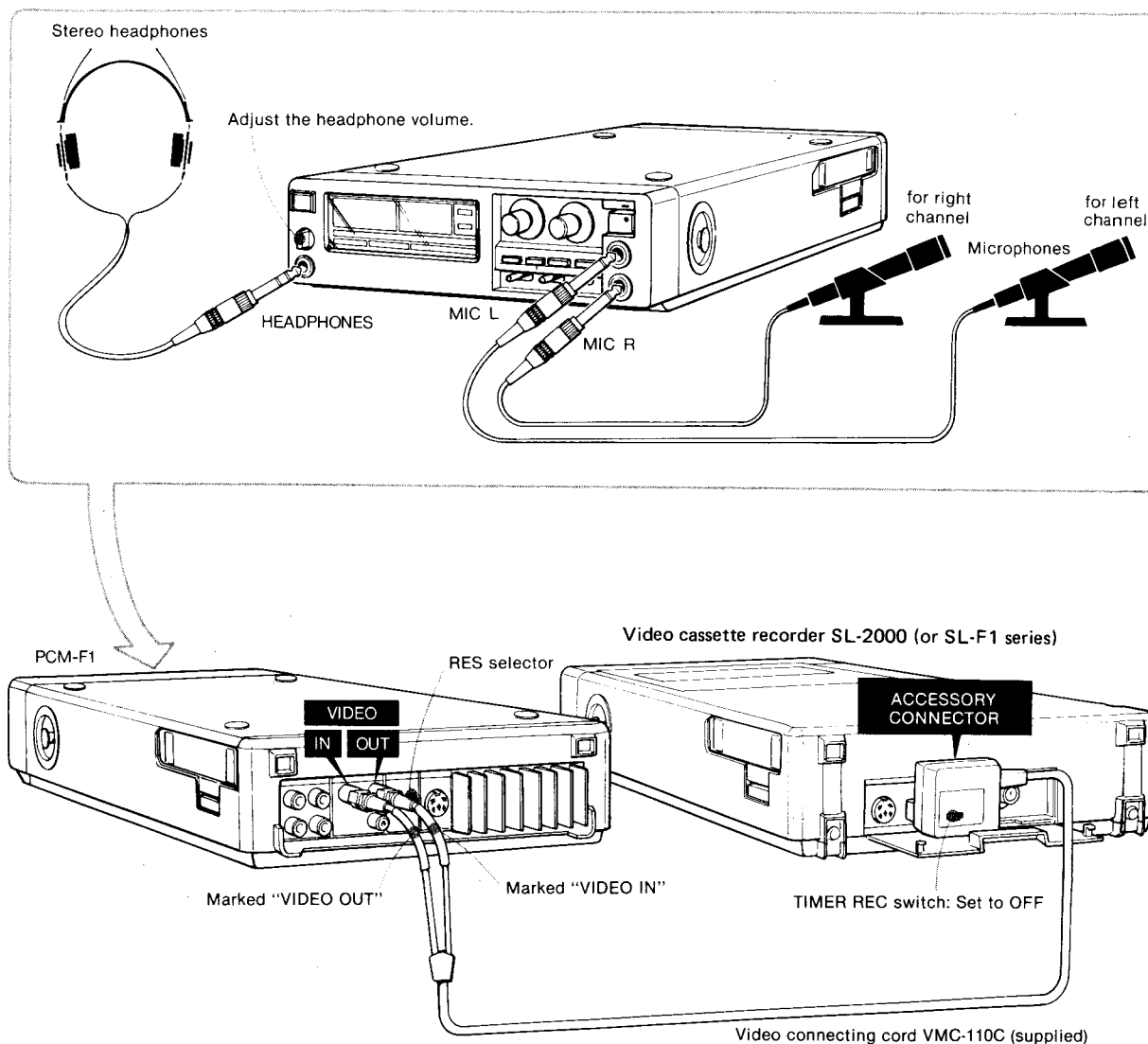
CONNECTION NOTES

- Turn off the amplifier before making connections.
- The supplied connecting cords with red and white plugs are for audio signals, and those with yellow plugs are for video signals.
- Be sure to connect the red plug of the supplied audio connecting cord to the right-channel [R] jack and the white plug to the left-channel [L] jack.
- To connect the unit with the Sony SL-2000 (or SL-F1 series) video cassette recorder, use the supplied VMC-110C video connecting cord. To connect the unit with a video cassette recorder other than the SL-2000 (or SL-F1 series), use the supplied VMC-1S video connecting

connecting cords with phono plugs of the VMC-110C are labelled to with a BNC-type plug and phono plug). The yellow plugs of the VMC-110C are labelled to indicate the signal flow. The plug labelled VIDEO IN should be connected to the VIDEO OUT jack of this unit and the one labelled VIDEO OUT to the VIDEO IN jack.



CONNECTION WITH THE SONY SL-2000 (or SL-F1 SERIES) VIDEO CASSETTE RECORDER (FOR OUTDOOR LIVE RECORDING)

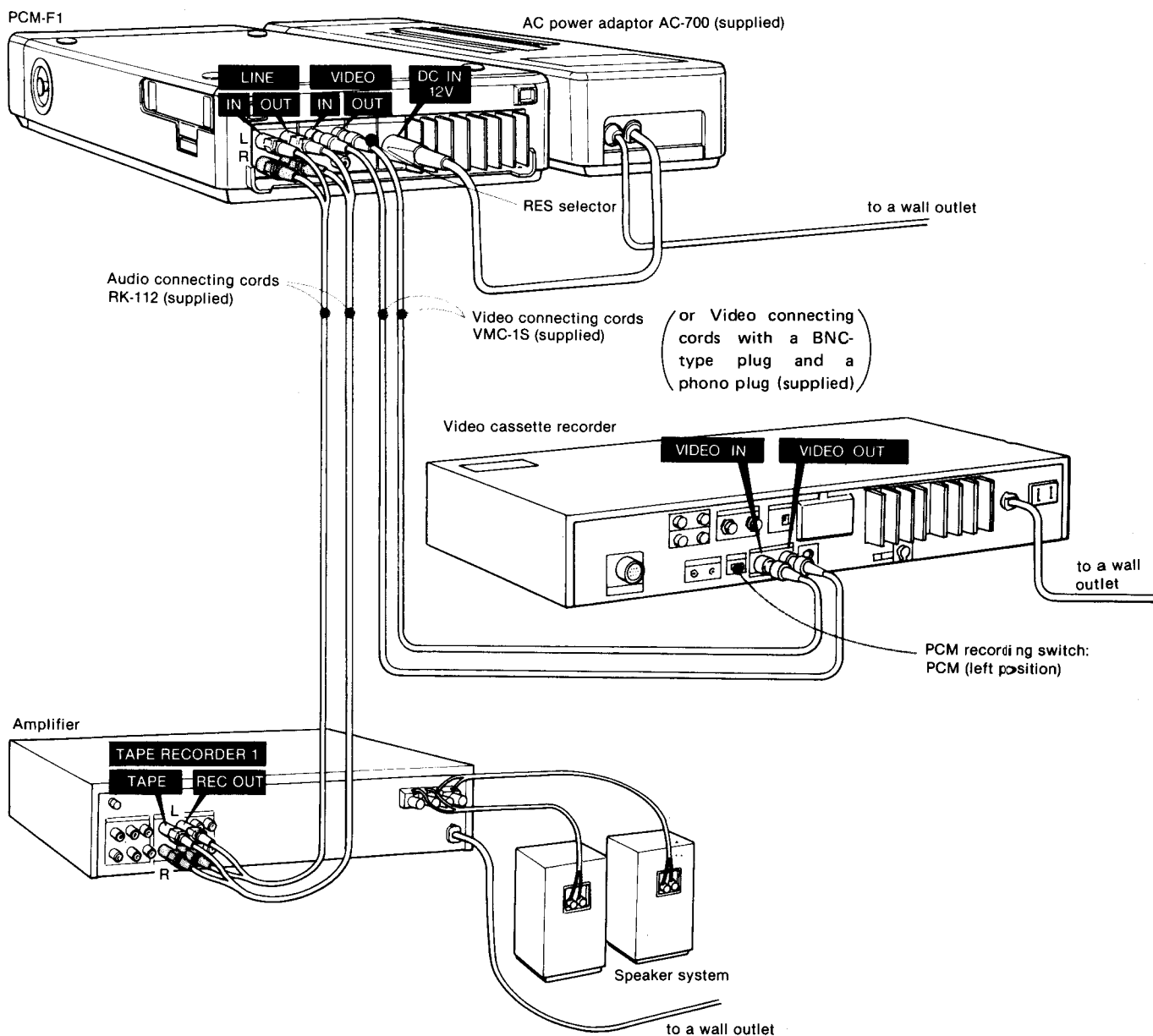


- Be sure to connect both the VIDEO IN and VIDEO OUT jacks to the video cassette recorder. If the VIDEO IN jack of this unit is not connected to the video output of the video cassette recorder, recording is possible but you cannot monitor the recording, and the peak program meters will not deflect.

- The cable connectors should be fully inserted into the jacks. A loose connection may cause hum and noise.
- Keep the connecting cords away from the power cords or speaker cords to avoid hum pick-up, and maintain a moderate separation between the connecting cords and any antenna lead-in to avoid possible noise pick-up. Keep the cables as short as practical.
- We recommend using the Sony SL-2000 (or SL-F1 series) portable video cassette recorder or any other Sony video cassette recorder.

● For detailed information about connections of the video cassette recorder and amplifier, refer to the instruction manual supplied with each unit.

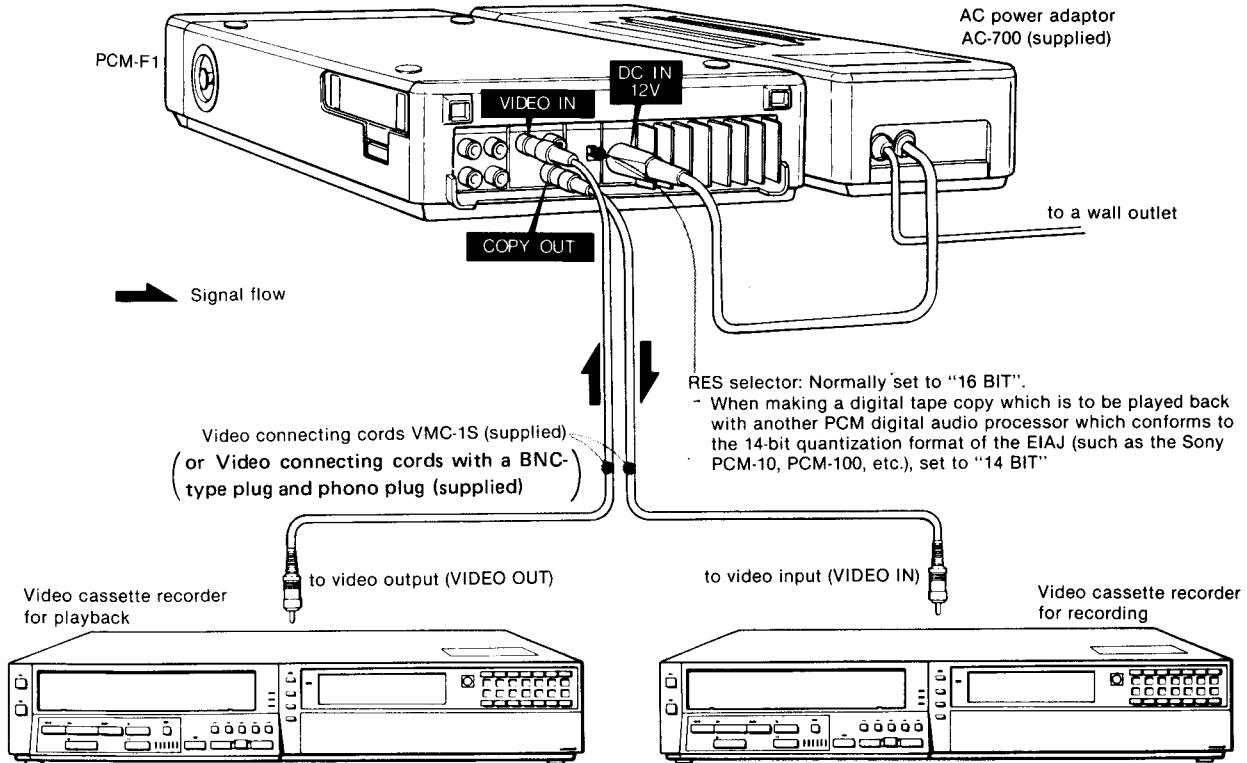
CONNECTION WITH A VIDEO CASSETTE RECORDER OTHER THAN THE SL-2000 (or SL-F1 SERIES)



DIGITAL TAPE COPY

Using the COPY OUT jack of this unit and a pair of video cassette recorders, you can make digital-to-digital tape copy with absolutely no deterioration in signal quality.

CONNECTION



OPERATING PROCEDURE

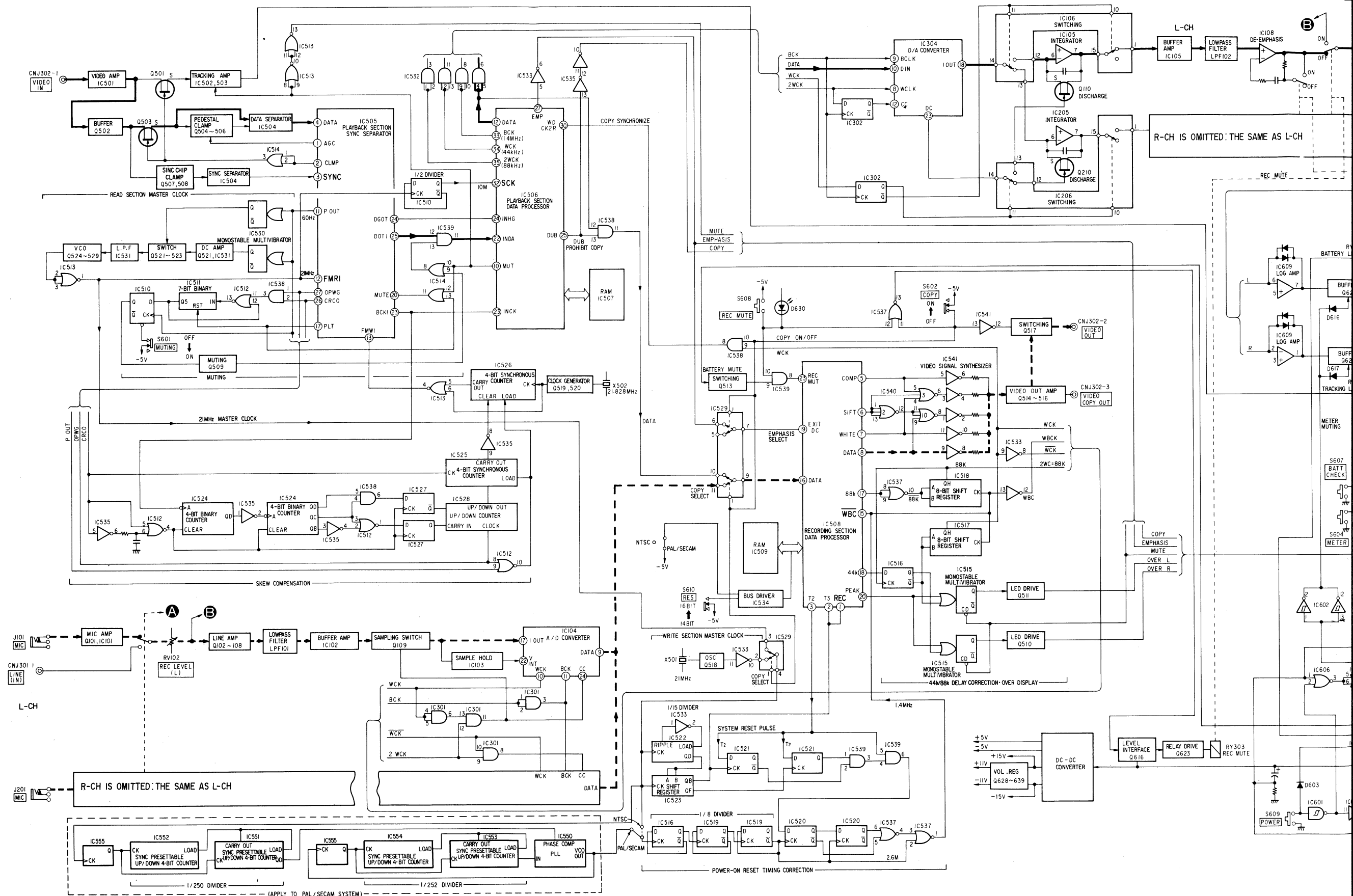
- 1 Turn on the unit and video cassette recorders.
- 2 Insert a recorded tape into the video cassette recorder for playback and a blank tape into the video cassette recorder for recording.
- 3 Set the COPY switch of the PCM-F1 to ON.
- 4 Start the playback of the video cassette recorder for playback and the recording of the video cassette recorder for recording. Copying will begin.

After the tape copy has been completed, be sure to set the COPY switch to OFF.

Important points to remember

- The reproduced sound being monitored through the headphones or speakers with the COPY switch set to ON may be somewhat more distorted than when played back and monitored with the switch set to OFF. However, the tape will be copied with no deterioration in signal quality.
 - No recording level adjustment is necessary when making a digital-to-digital tape copy.
 - A tape on which the tape copy prohibiting code has been recorded cannot be duplicated. When such a tape is played back, the COPY PROHIBITING indicator will light up.
 - Be sure to set the COPY switch to ON for digital tape copy. Digital-to-digital tape copy cannot be performed with the COPY switch set to OFF.
- Do not move the COPY switch during tape copy or during normal recording and playback.

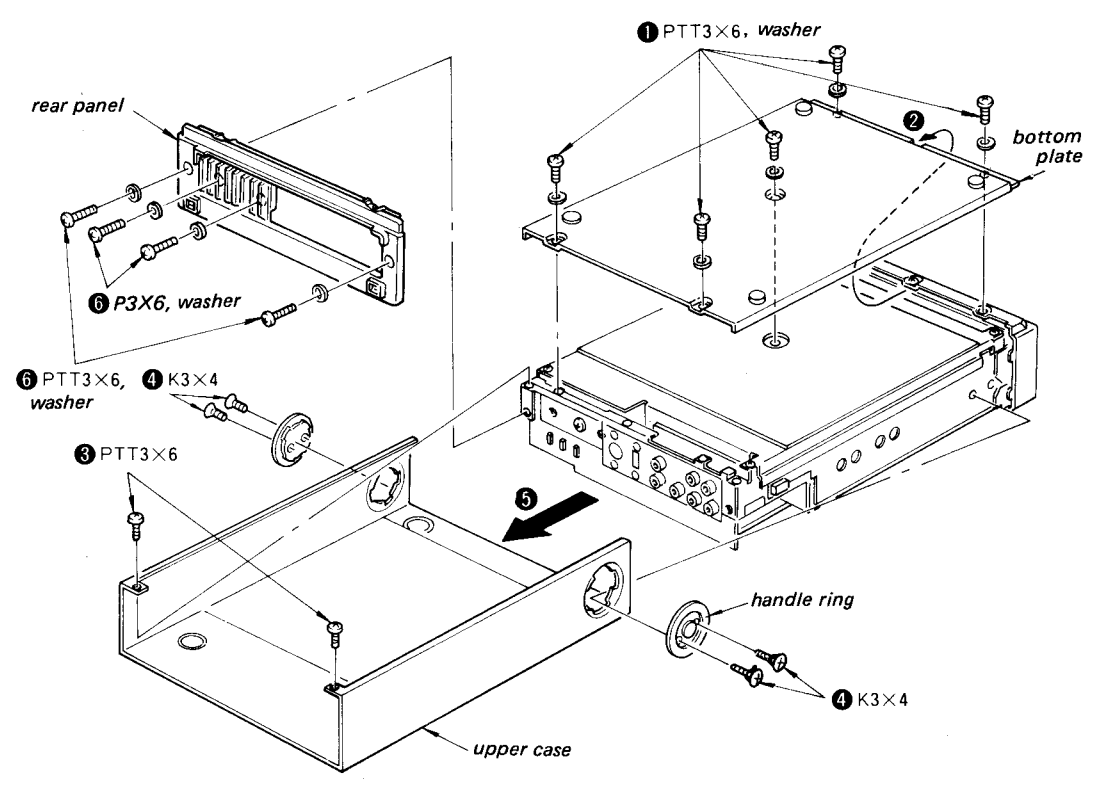
BLOCK DIAGRAMS



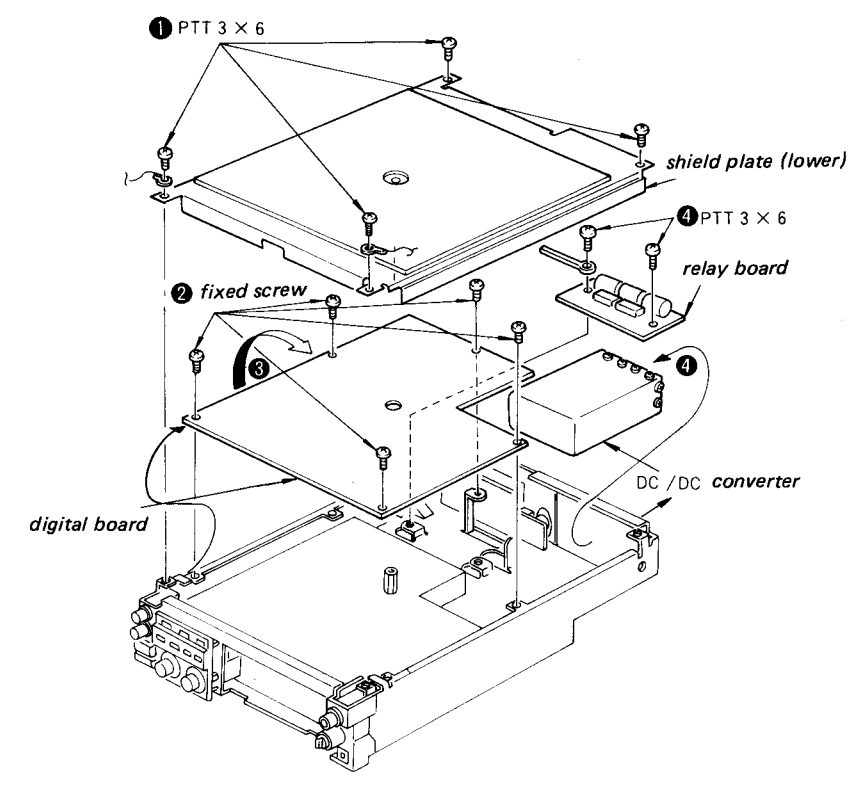
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

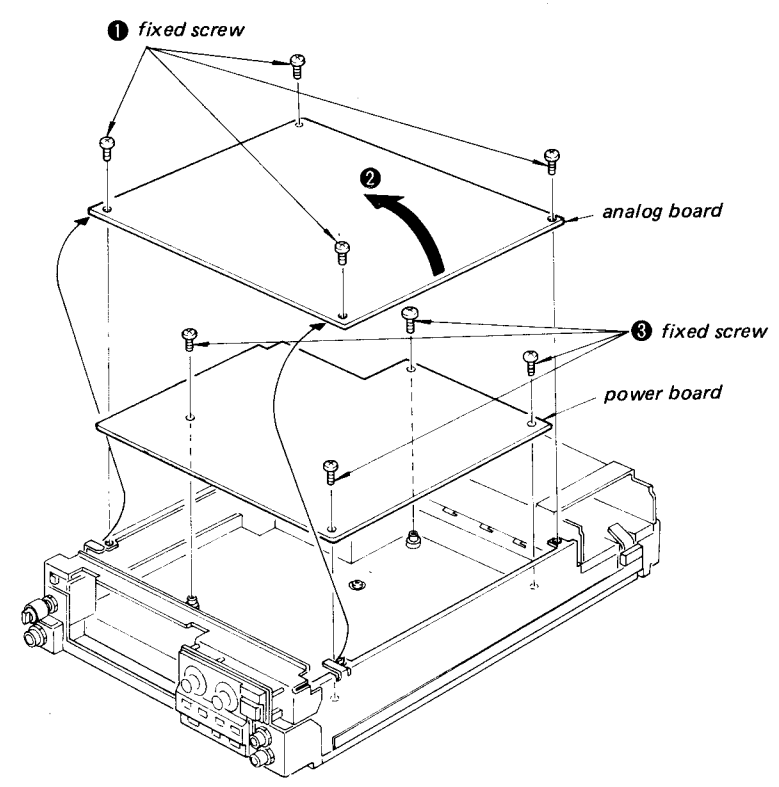
BOTTOM PLATE, UPPER CASE, REAR PANEL



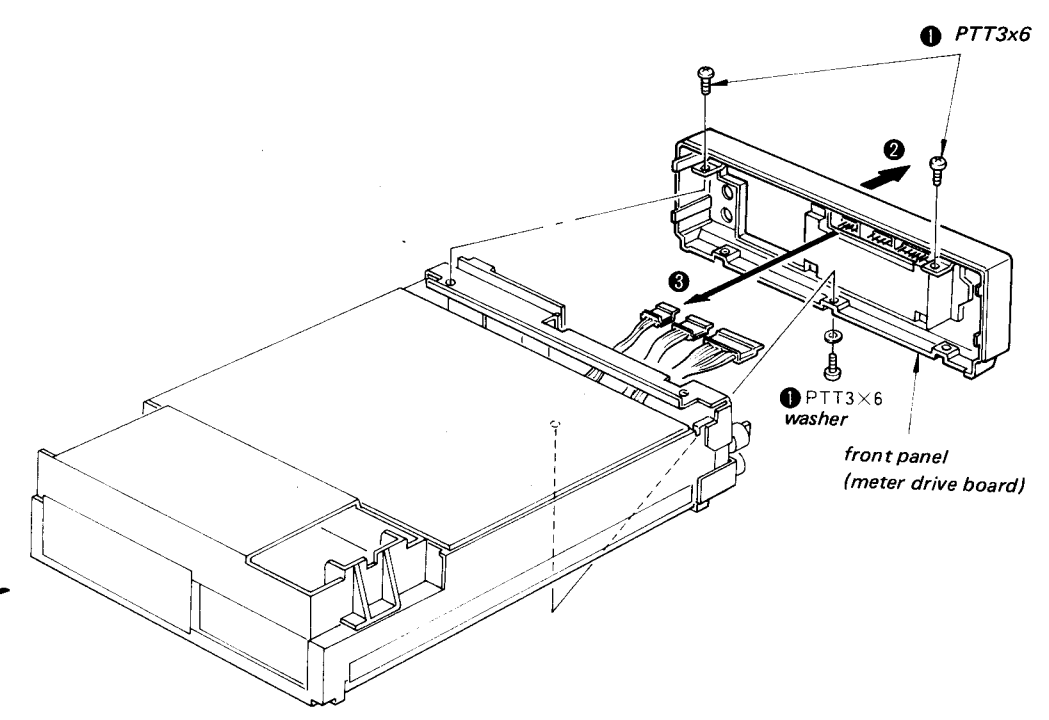
DIGITAL BOARD, RELAY BOARD, DC/DC CONVERTER



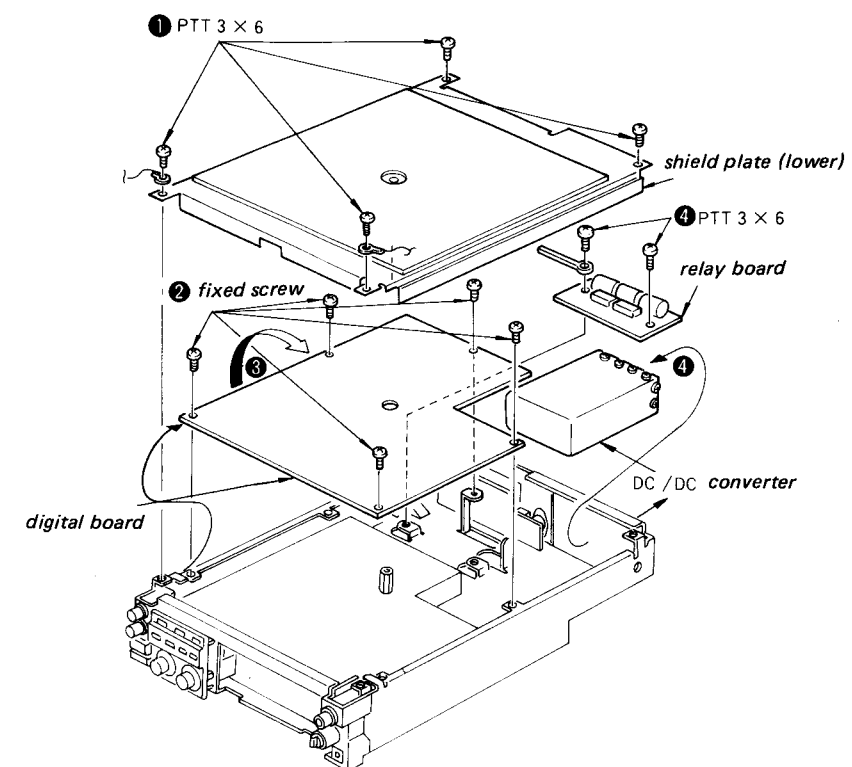
ANALOG BOARD, POWER BOARD



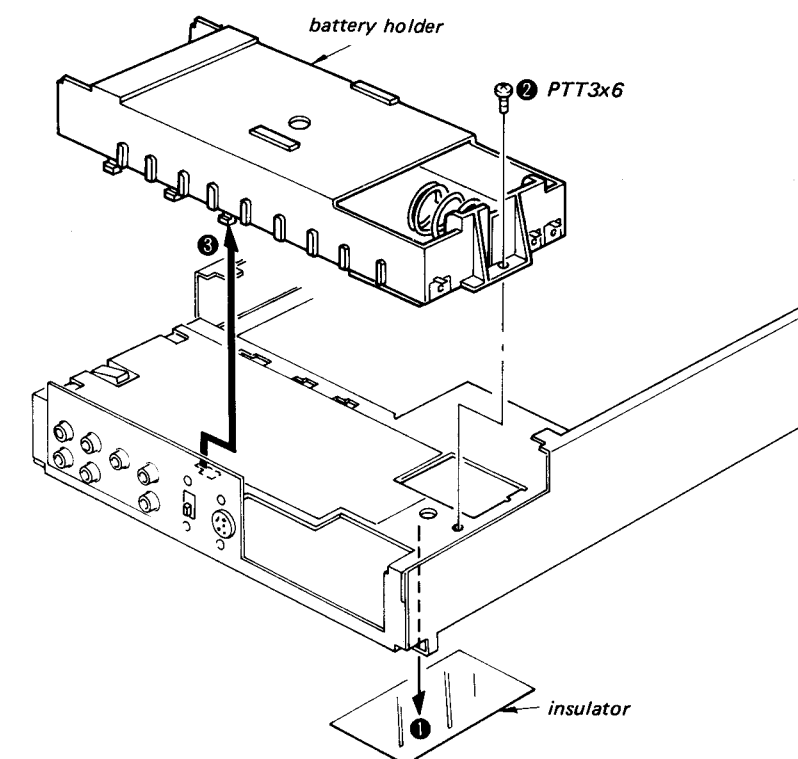
FRONT PANEL (METER DRIVE BOARD)



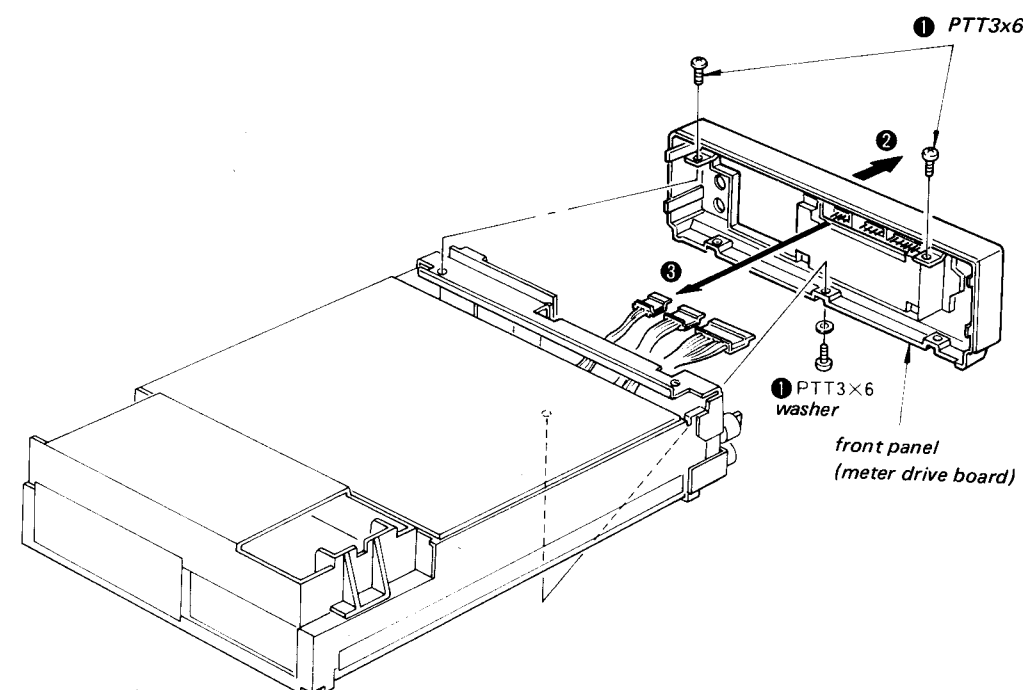
DIGITAL BOARD, RELAY BOARD, DC/DC CONVERTER



BATTERY HOLDER

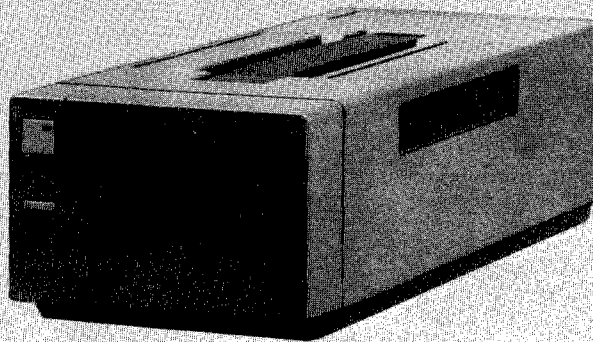


FRONT PANEL (METER DRIVE BOARD)



AC-700

*US Model
Canadian Model
AEP Model
UK Model*




AC POWER ADAPTOR


SPECIFICATIONS

| | |
|---|--|
| Power Requirements: | US, Canadian Model ---- AC 120V ac, 60Hz AEP Model ----- AC 220V ac, 50/60Hz UK Model ----- 240V ac, 50/60Hz |
| Rated Power: | 79W |
| Output Voltage: (with AC Power Adaptor) | DC 14V $\pm 5\%$ (with rated power $\pm 10\%$ input, 1.6A dc load) |
| Output Current: (at Charging mode) | DC 2.1A $\pm 10\%$ (at battery voltage 10–16.5V) |
| Dimensions: | Approx. 107x80x305 mm (w/h/d) (4 $\frac{1}{4}$ x3 $\frac{1}{4}$ x12 $\frac{1}{8}$ inches) |
| Weight: | Approx. 3.2kg (7 lbs 1oz) net |

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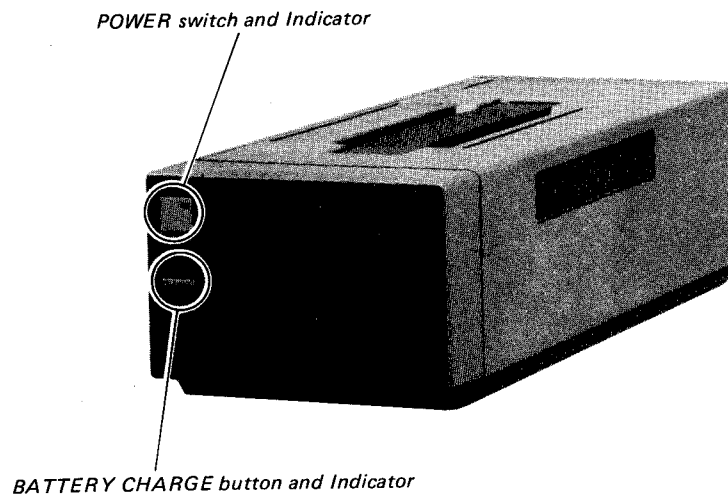


SONY®

SERVICE MANUAL

AC-700

LOCATION



SECTION 1

CIRCUIT DESCRIPTION

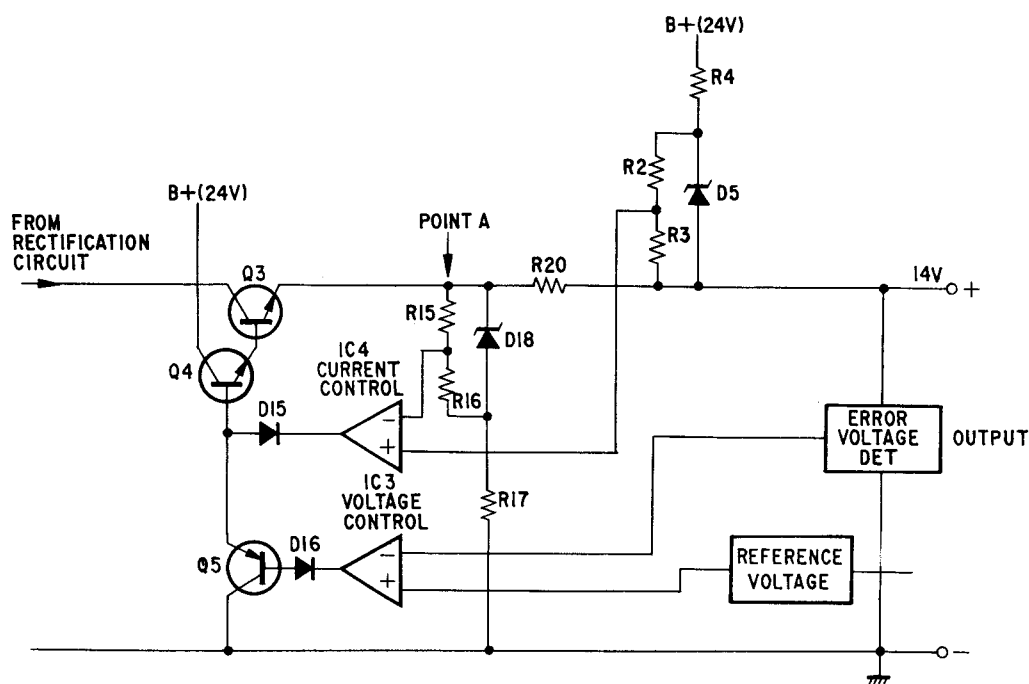
AC-700 is the ac power adaptor for PCM-F1 (digital audio processor). It also has the capability to charge the NP-1 rechargeable battery pack for PCM-F1.

— AC Power Adaptor

Figure 1 is the voltage, current and control section circuit diagram for AC-700. When PCM-F1 is connected to AC-700 operating as an AC power adaptor, reference voltage and load voltage are compared by the voltage control op amp (IC3), which controls series transistor Q3 so that the load voltage becomes 14V regulated voltage.

If load current is less than 2.1A (1.6A is normal) the current control op amp IC4 uses point A as the reference, and because the noninverted input terminal is biased to the positive side and the inverted input terminal to the negative side, the output terminal goes high and D15 cuts off.

Therefore, IC4 does not affect the operation of series transistor Q3.



(Figure 1)

— Charging

Figure 2 is a circuit diagram of the charging control section prepared for charging. When the BATTERY CHARGE button (SW2) is pushed, the charging control IC (IC2) trigger terminal is grounded, flip-flop is set and the output terminal goes high.

Then the CHARGE lamp (LED2) lights up, Q2 goes on and Q6 goes off.

There are two zener diodes, D20 (for AC power adaptor) and D21 (for charging) in the reference voltage circuit, which are switched by Q6.

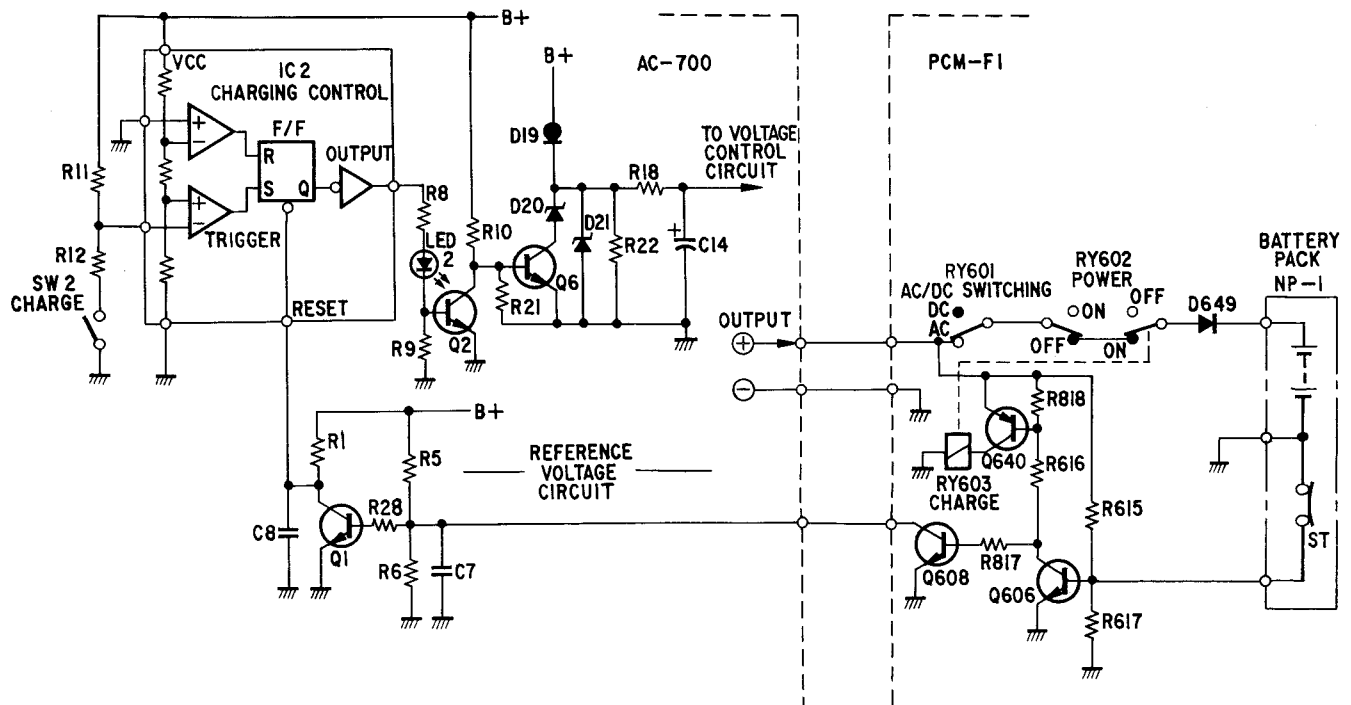
The zener voltage for D20 is lower than that of D21. When Q6 is on, D20 and D21 are connected parallel, but because D20 zener voltage is lower, D21 does not operate.

When Q6 is off (during charging), D20 is cut off and D21 generates reference voltage. Therefore, during charging, higher output voltage than for when operating as an AC power adaptor is supplied to the battery pack (NP-1) which is the load. However, when charging current goes over 2.1A,

the voltage drop generated at current detection resistor R20 (see Fig. 1) is applied to the current control op amp's (IC4) noninverted input terminal and the output terminal shifts to low level. Then D15 turns on, series transistor Q3 VCE gets larger and output voltage drops. As a result, charging current does not go over 2.1A but becomes 2.1A regulated current. When charging current is below 2.1A the load voltage becomes 17V regulated voltage because of the voltage control circuit.

When charging is completed, the internal temperature of battery pack NP-1 rises, the built-in thermostat ST operates and turns off.

When ST goes off, the PCM-F1 Q606 (see Fig. 2) goes on, Q640 goes on, RY603 is set and the charging circuit is interrupted. Then Q608 goes off, AC-700, Q1 goes on, IC2 reset terminal becomes 0V (low level), the output terminal becomes 0V (low level) and LED2 goes out to indicate charging completed.

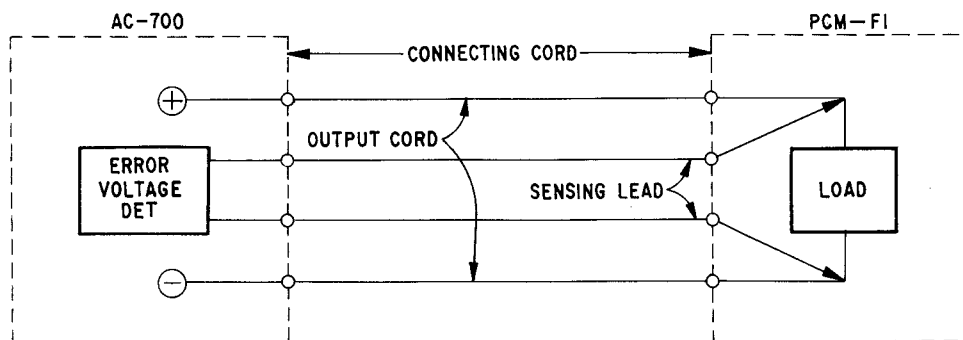


(Figure 2)

Remote Sensing

AC-700 utilizes remote sensing in the voltage control section error voltage detection circuit. When the load current for the output cord connecting the regulated voltage power supply output terminal and the load is large, an exceptionally large voltage drop results, adversely affecting the load side.

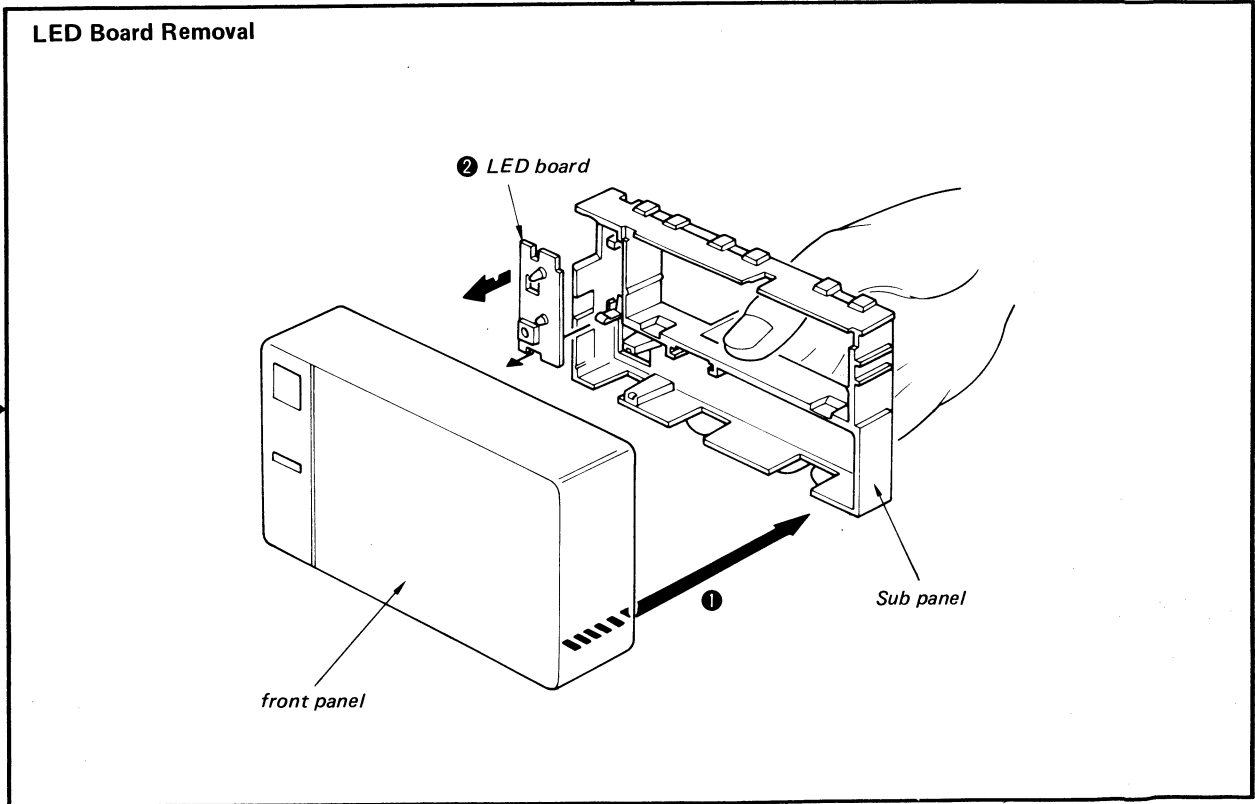
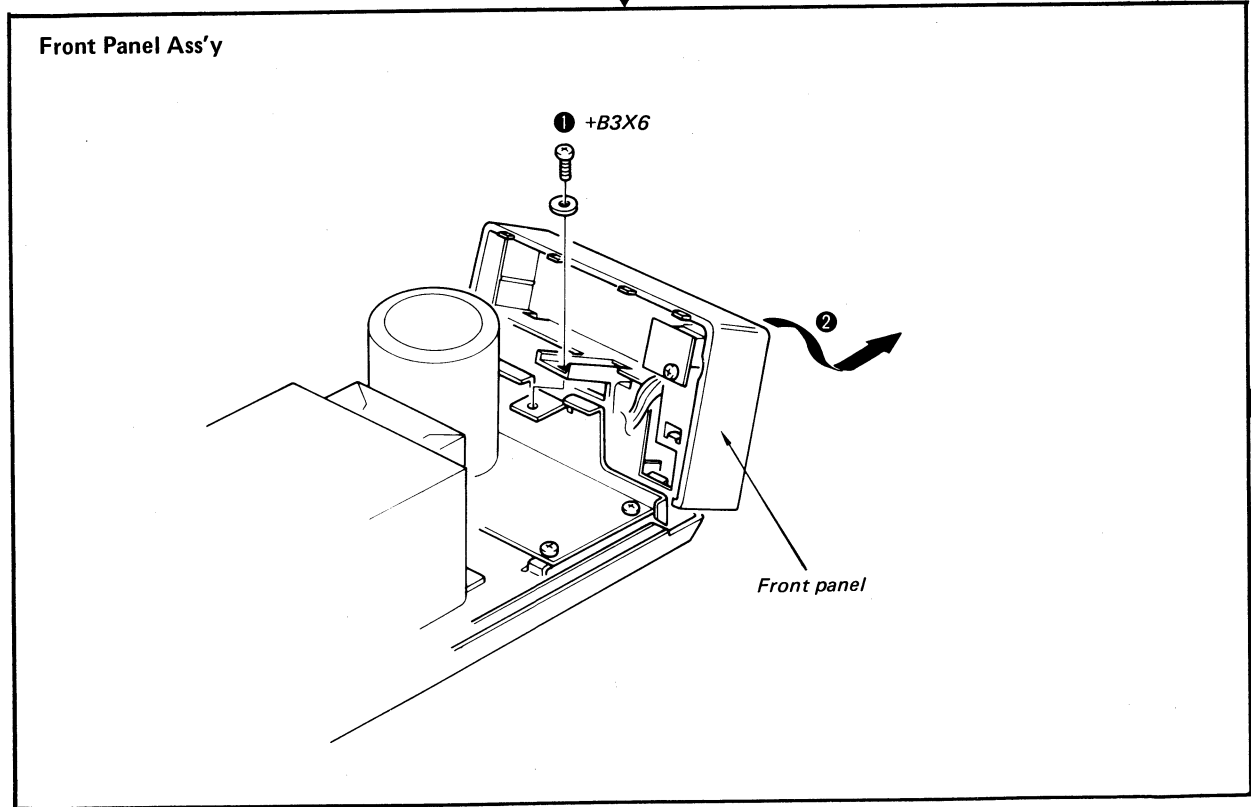
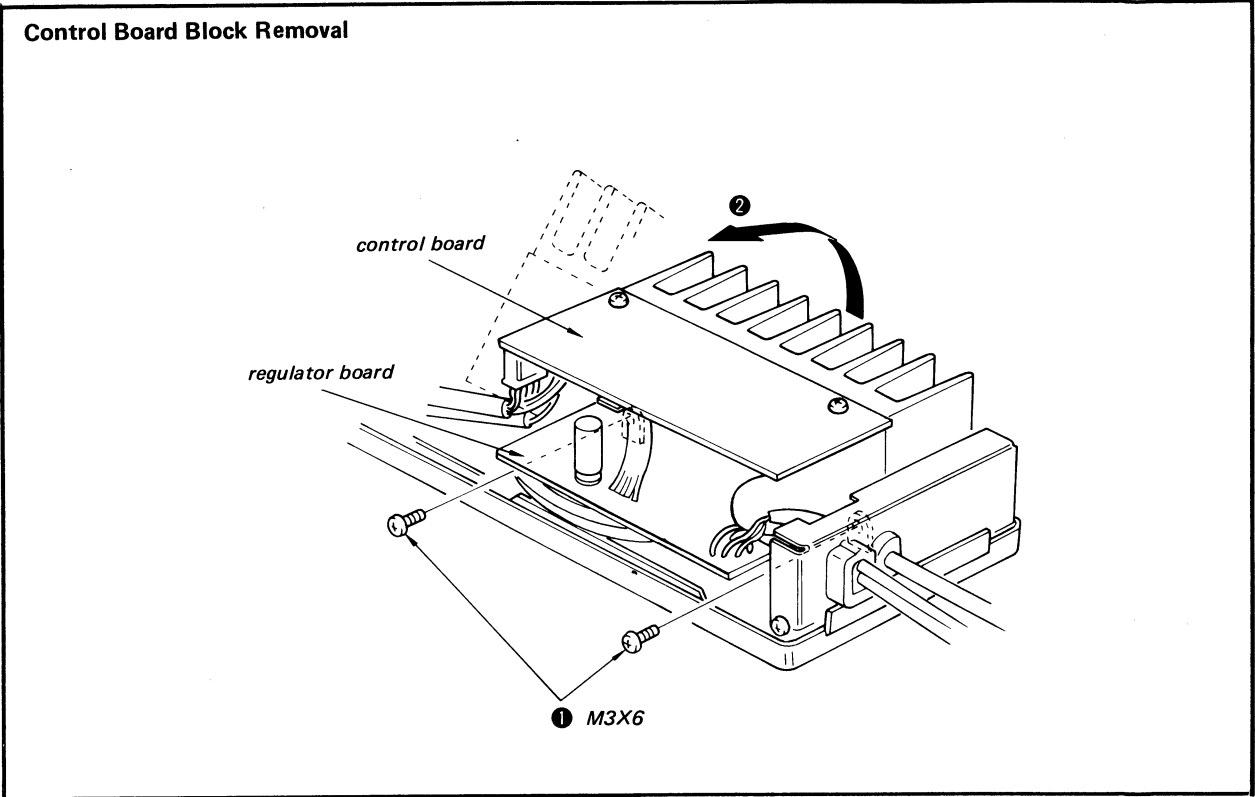
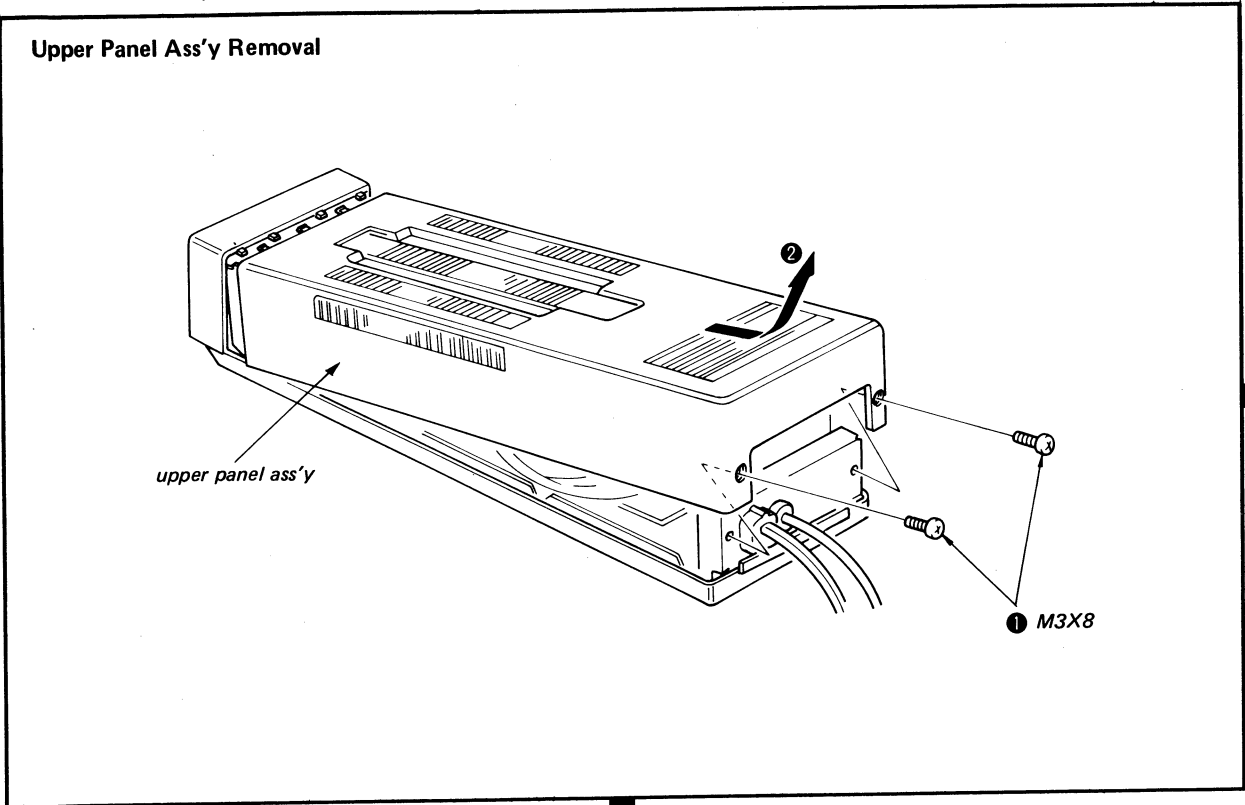
On AC-700, the error voltage detection is led not from the output terminal but through the connecting cord sensing lead directly from the PCM-F1 power supply input terminal, so the voltage drop because of the output cord and connector contact resistance is compensated for.



(Figure 3)

SECTION 2
DISASSEMBLY

● Remove the parts in the numerical order.



SECTION 3
DIAGRAMS
B

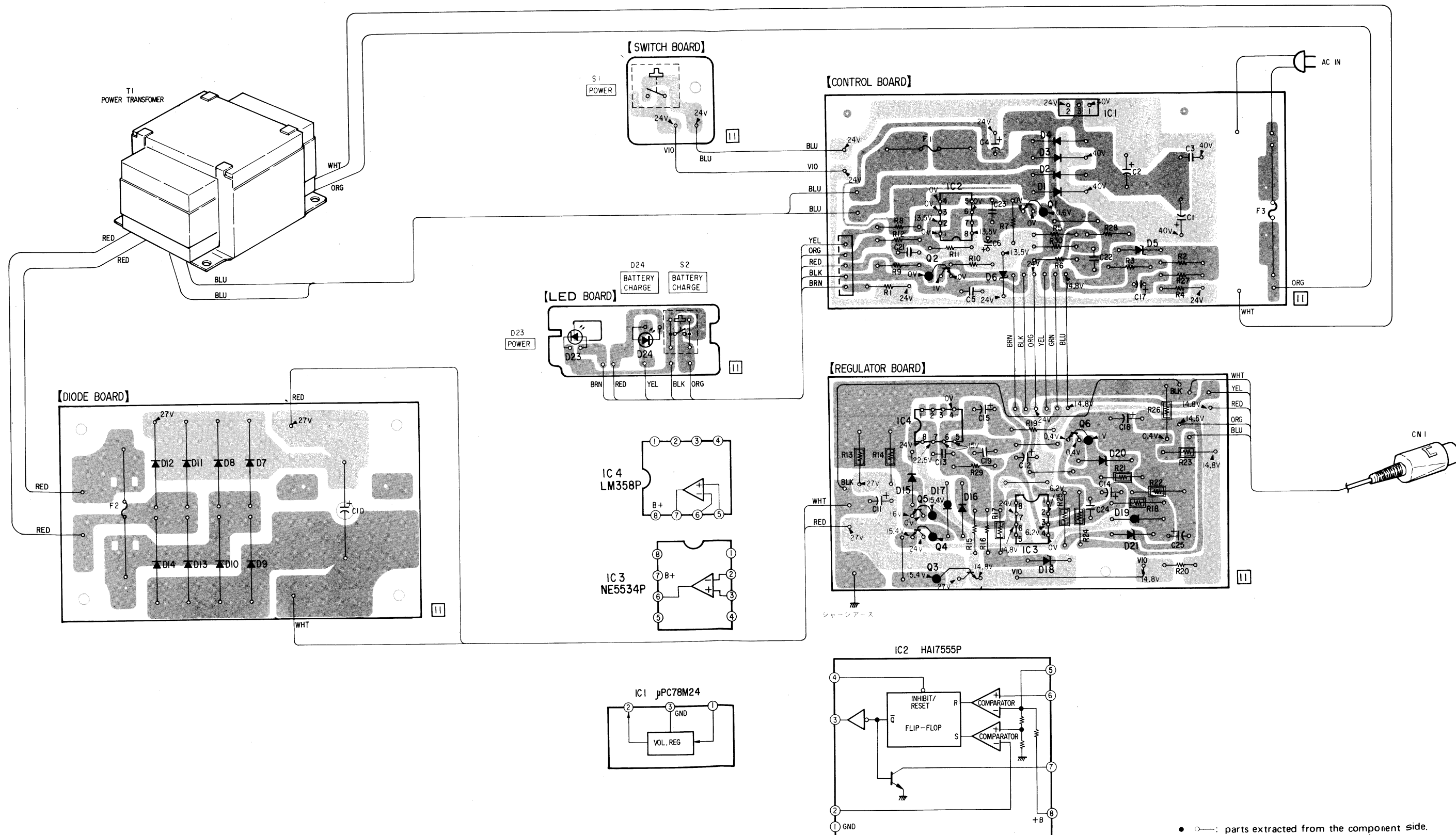
US Model
Canadian Model

AC-700 AC-700

US Model
Canadian Model

3-1. MOUNTING DIAGRAM

| Q IC | 12 | 11 | 8 | 7 | 23 | 24 | 15 | 17 | 16 | 6 | 3 | 2 | 1 | IC1 | 6 | IC |
|---------|----|----|----|---|----|----|----|----|----|---|---|---|---|-----|---|----|
| D | 14 | 13 | 10 | 9 | | | | | | | | | | | | D |



- : parts extracted from the component side.
- : part mounted on the conductor side.
- : B+ pattern

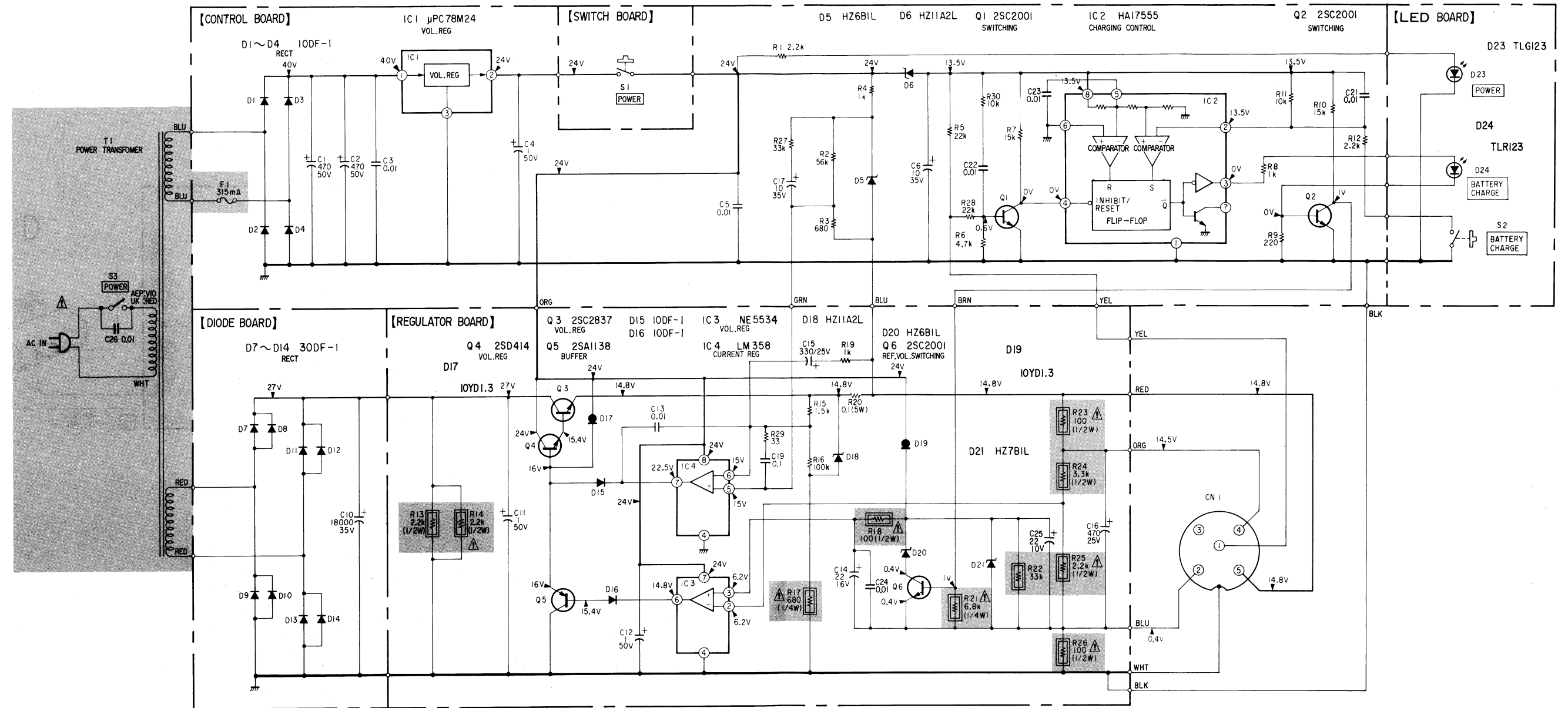
3-2. SCHEMATIC DIAGRAM


US Model
Canadian Model


AC-700

AC-700




US Model
Canadian Model



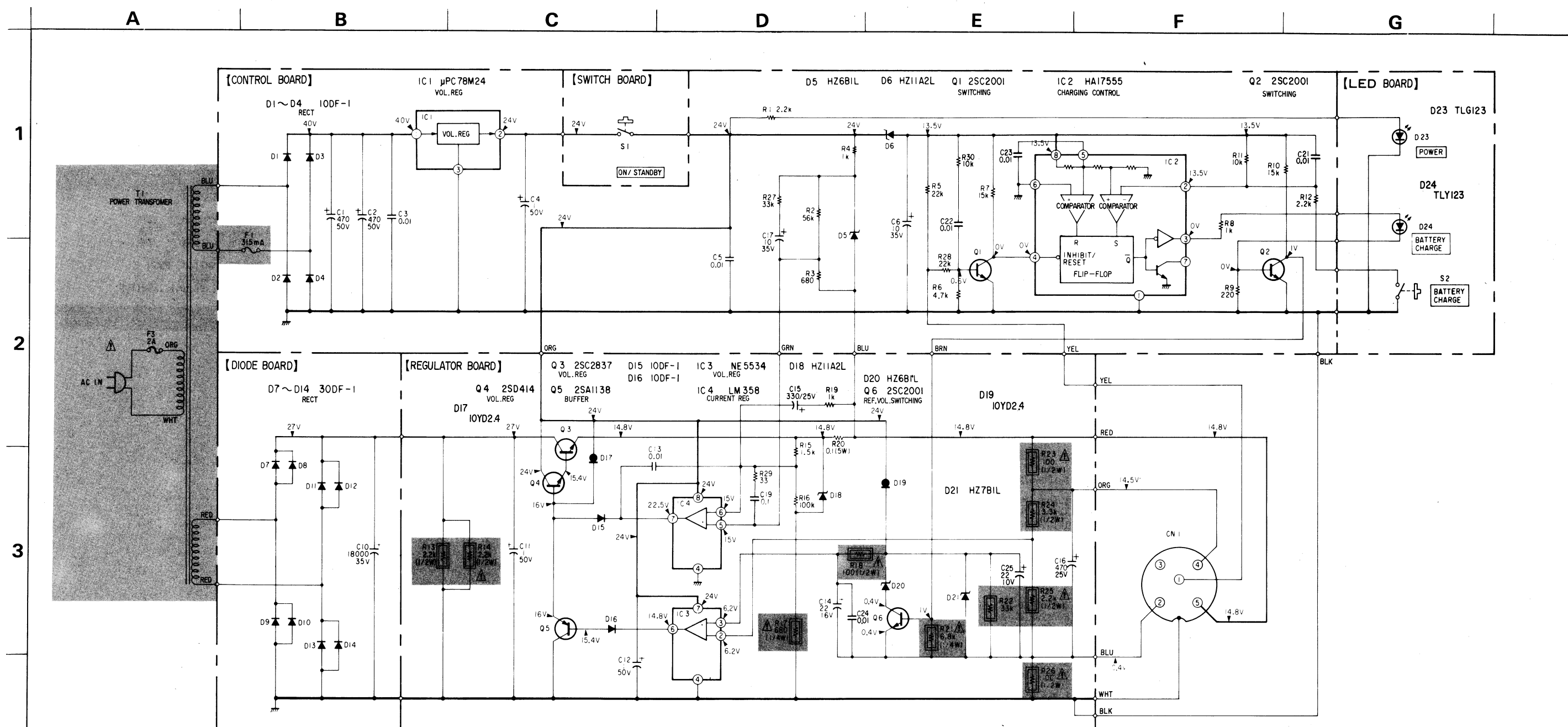
Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.


Note: Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.


Note: Voltage are measured with a VOM (50kΩ/V)

- All resistors are in ohms, ¼ W unless otherwise noted.
kΩ : 1000 Ω, MΩ : 1000 kΩ
-  : nonflammable resistor.
-  : panel designation.
-  : B+ bus.
- Switch




| Ref. No. | Switch | Position |
|----------|----------------|----------|
| S1 | POWER | OFF |
| S2 | BATTERY CHARGE | OFF |



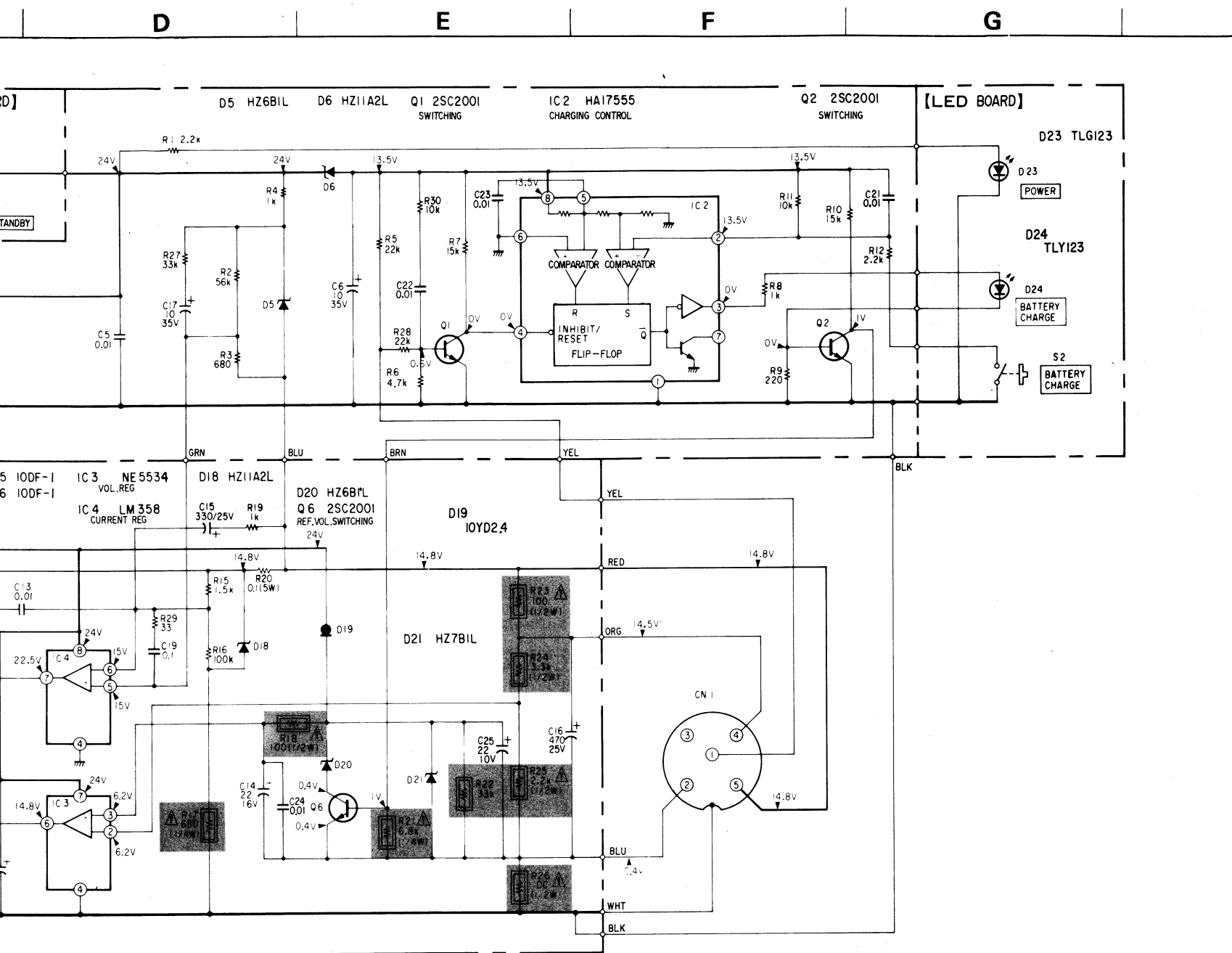
Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.


Note: Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.


Note: Voltage are measured with a VOM (50kΩ/V)

- All resistors are in ohms, 1/4 W unless otherwise noted.
kΩ : 1000 Ω, MΩ : 1000 kΩ
-  : nonflammable resistor.
-  : panel designation.
-  : B+ bus.
- Switch




| Ref. No. | Switch | Position |
|----------|----------------|----------|
| S1 | POWER | OFF |
| S2 | BATTERY CHARGE | OFF |



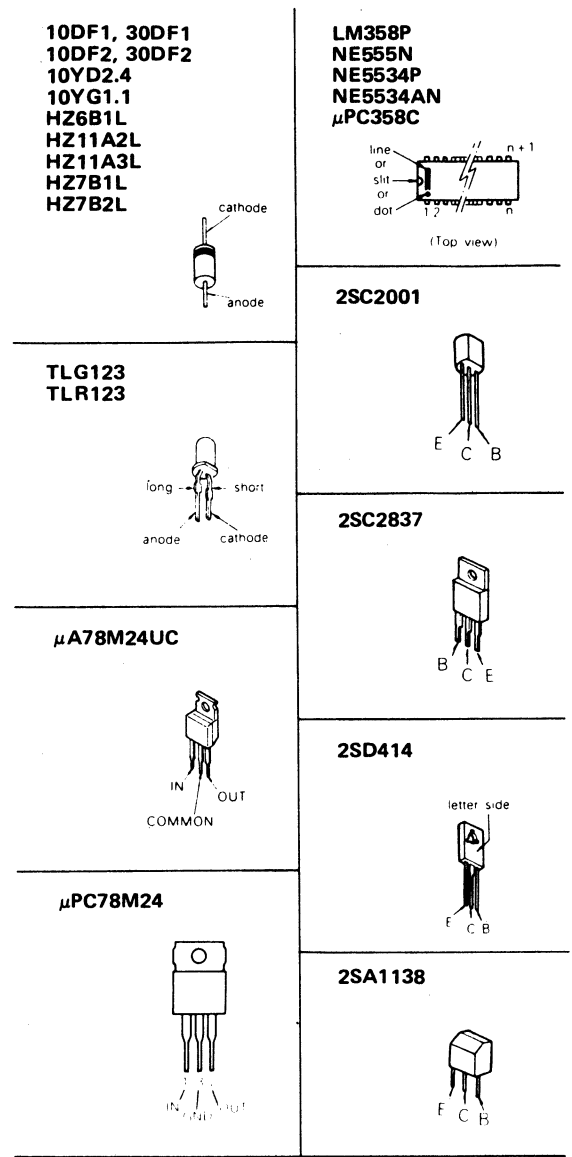
Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Note: Voltage are measured with a VOM (50kΩ/V)

- All resistors are in ohms, 1/4 W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ
 -  : nonflammable resistor.
 -  : panel designation.
 -  : B+ bus.
 - Switch
- | Ref. No. | Switch | Position |
|----------|----------------|----------|
| S1 | POWER | OFF |
| S2 | BATTERY CHARGE | OFF |

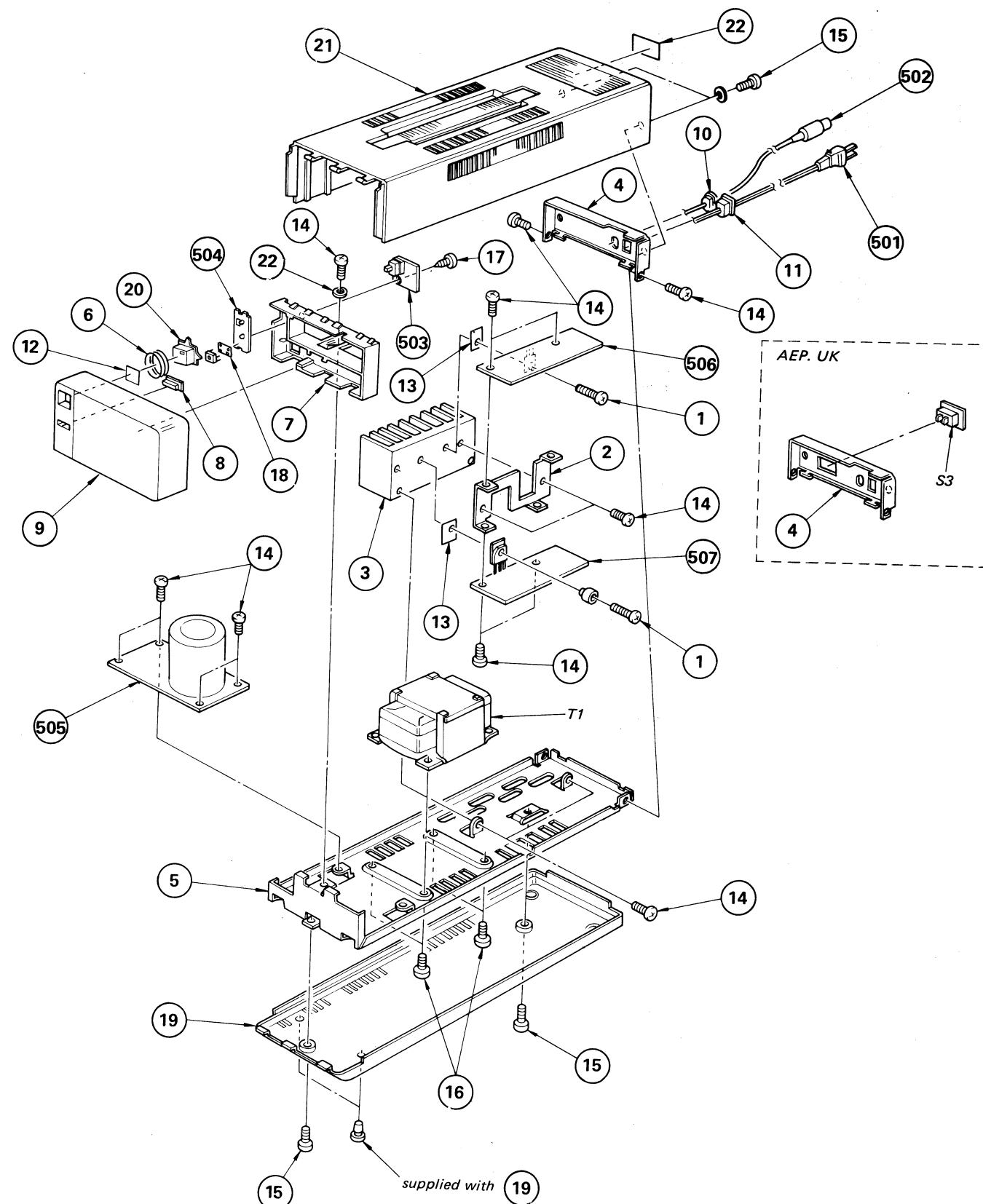
• Semiconductor Lead Layouts



SECTION 4

EXPLODED VIEW AND PARTS LIST

A B C D



GENERAL SECTION

| No. | Part No. | Description |
|-----|--------------|----------------------------|
| 1 | 2-259-121-00 | SCREW M3X10 |
| 2 | 2-362-366-00 | BRACKET, PC BOARD |
| 3 | 2-362-367-00 | HEAT SINK |
| 4 | 2-362-388-00 | (US, CND).....PANEL, REAR |
| 5 | 2-362-369-00 | CHASSIS |
| 6 | 2-291-509-00 | SPRING |
| 7 | 2-291-527-00 | PANEL, SUB |
| 8 | 2-291-502-00 | BUTTON (B) |
| 9 | 2-362-357-00 | (US, CND).....PANEL, FRONT |
| 9 | 2-362-357-11 | (AEP, UK).....PANEL, FRONT |
| 10 | 3-005-073-00 | BUSHING, CORD |
| 11 | 3-703-244-00 | BUSHING, CORD |
| 12 | 3-831-441-11 | CUSHION |
| 13 | 4-857-833-00 | SHEET |
| 14 | 7-682-547-09 | SCREW +B 3X6 |
| 15 | 7-682-548-09 | SCREW +B M3X8 |
| 16 | 7-682-560-04 | SCREW M4X6 |
| 17 | 7-685-145-21 | SCREW +PTP M3X6 |
| 18 | 9-911-863-XX | SPACER |
| 19 | A-6703-160-A | PANEL ASSY, LOWER |
| 20 | X-2291-502-0 | BUTTON (A) |
| 21 | X-2291-504-0 | PANEL ASSY, UPPER |
| 22 | 7-688-003-02 | WASHER |
| 23 | 4-026-252-00 | BUSHING, INSULATING |

ELECTRICAL PARTS

| Ref.No. | Part No. | Description | Ref.No. | Part |
|---------|--------------|----------------------------------|---------|-------|
| 501 | 1-555-795-00 | (AEP).....CORD, POWER | D13 | 8-719 |
| 501 | 1-555-036-00 | (UK).....CORD, POWER | D14 | 8-719 |
| 501 | 1-555-701-00 | (US, Canadian)....CORD, POWER | D15 | 8-719 |
| | | | D16 | 8-719 |
| 502 | 1-556-379-00 | CORD, OUTPUT, DC | | |
| 503 | 1-608-159-00 | PC BOARD, SWITCH | D17 | 8-719 |
| 504 | 1-608-160-00 | PC BOARD, LED | D17 | 8-719 |
| 505 | 1-608-161-00 | PC BOARD, DIODE | D18 | 8-719 |
| 506 | 1-608-162-00 | PC BOARD, CONTROL | D19 | 8-719 |
| 507 | 1-608-163-00 | PC BOARD, REGULATOR | D19 | 8-719 |
| C1 | 1-123-363-00 | ELECT 470MF 50V | D20 | 8-719 |
| C2 | 1-123-363-00 | ELECT 470MF 50V | D21 | 8-719 |
| C3 | 1-130-297-00 | FILM 0.01MF 100V | D23 | 8-719 |
| C4 | 1-131-450-00 | TANTAL 1MF 50V | D24 | 8-719 |
| C5 | 1-130-297-00 | FILM 0.01MF 100V | D24 | 8-719 |
| C6 | 1-123-356-00 | ELECT 10MF 50V | | |
| C7 | 1-108-579-00 | FILM 0.01MF | F1 | .1-53 |
| C8 | 1-108-579-00 | FILM 0.01MF | F2 | .1-53 |
| C10 | 1-125-312-00 | ELECT 18000MF 35V | F3 | .1-53 |
| C11 | 1-131-450-00 | TANTAL 1MF 50V | IC1 | 8-75 |
| C12 | 1-131-450-00 | TANTAL 1MF 50V | IC2 | 8-75 |
| C13 | 1-130-297-00 | FILM 0.01MF 100V | IC3 | 8-75 |
| | | | IC4 | 8-75 |
| C14 | 1-123-520-00 | TANTAL 22MF 16V | Q1 | 8-72 |
| C15 | 1-123-335-00 | ELECT 330MF 25V | Q2 | 8-72 |
| C16 | 1-123-696-00 | ELECT 470MF 25V | Q3 | 8-72 |
| C17 | 1-123-356-00 | ELECT 10MF 35V | Q4 | 8-72 |
| C19 | 1-161-773-00 | CERAMIC 0.01MF 25V | Q5 | 8-72 |
| C21 | 1-108-579-00 | FILM 0.01MF | Q6 | 8-72 |
| C22 | 1-108-579-00 | FILM 0.01MF | R1 | 1-24 |
| C23 | 1-108-579-00 | FILM 0.01MF | R2 | 1-24 |
| C24 | 1-130-297-00 | FILM 0.01MF 100V | R3 | 1-24 |
| C25 | 1-131-520-00 | TANTAL 22MF 16V | R4 | 1-24 |
| C26 | 1-161-744-00 | (AEP, UK)....CERAMIC 0.01MF 400V | R5 | 1-24 |
| | | | R6 | 1-24 |
| CN1 | 1-508-743-00 | CONNECTOR 5P | R7 | 1-24 |
| D1 | 8-719-210-12 | DIODE 10DF2 | R8 | 1-24 |
| D2 | 8-719-210-12 | DIODE 10DF2 | R9 | 1-24 |
| D3 | 8-719-210-12 | DIODE 10DF2 | | |
| D4 | 8-719-210-12 | DIODE 10DF2 | R10 | 1-24 |
| D5 | 8-719-910-64 | DIODE HZ6B1L | R11 | 1-24 |
| D6 | 8-719-910-13 | DIODE HZ11A3L | R12 | 1-24 |
| D7 | 8-719-230-02 | DIODE 30DF2 | R13 | .1-21 |
| D8 | 8-719-230-02 | DIODE 30DF2 | R14 | .1-21 |
| D9 | 8-719-230-02 | DIODE 30DF2 | R15 | 1-21 |
| D10 | 8-719-230-02 | DIODE 30DF2 | R16 | 1-21 |
| D11 | 8-719-230-02 | DIODE 30DF2 | R17 | .1-21 |
| D12 | 8-719-230-02 | DIODE 30DF2 | R18 | .1-21 |

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

COILS

- MMH : mH, UH : μH

The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

NOTE:

- Items with no part description are not stocked because they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

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|-----|--------------|---------------------------|
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| 2 | 2-362-366-00 | BRACKET, PC BOARD |
| 3 | 2-362-367-00 | HEAT SINK |
| 4 | 2-362-388-00 | (US,CND).....PANEL, REAR |
| 5 | 2-362-369-00 | CHASSIS |
| 6 | 2-291-509-00 | SPRING |
| 7 | 2-291-527-00 | PANEL, SUB |
| 8 | 2-291-502-00 | BUTTON (B) |
| 9 | 2-362-357-00 | (US,CND).....PANEL, FRONT |
| 9 | 2-362-357-11 | (AEP,UK).....PANEL, FRONT |
| 10 | 3-005-073-00 | BUSHING, CORD |
| 11 | 3-703-244-00 | BUSHING, CORD |
| 12 | 3-831-441-11 | CUSHION |
| 13 | 4-857-833-00 | SHEET |
| 14 | 7-682-547-09 | SCREW +B 3X6 |
| 15 | 7-682-548-09 | SCREW +B M3X8 |
| 16 | 7-682-560-04 | SCREW M4X6 |
| 17 | 7-685-145-21 | SCREW +PTP M3X6 |
| 18 | 9-911-863-XX | SPACER |
| 19 | A-6703-160-A | PANEL ASSY, LOWER |
| 20 | X-2291-502-0 | BUTTON (A) |
| 21 | X-2291-504-0 | PANEL ASSY, UPPER |
| 22 | 7-688-003-02 | WASHER |
| 23 | 4-026-252-00 | BUSHING, INSULATING |

ELECTRICAL PARTS

| Ref.No. | Part No. | Description |
|---------|--------------|---------------------------------|
| 501 | 1-555-795-00 | (AEP).....CORD, POWER |
| 501 | 1-556-036-00 | (UK).....CORD, POWER |
| 501 | 1-555-701-00 | (US,Canadian)....CORD, POWER |
| 502 | 1-556-379-00 | CORD, OUTPUT, DC |
| 503 | 1-608-159-00 | PC BOARD, SWITCH |
| 504 | 1-608-160-00 | PC BOARD, LED |
| 505 | 1-608-161-00 | PC BOARD, DIODE |
| 506 | 1-608-162-00 | PC BOARD, CONTROL |
| 507 | 1-608-163-00 | PC BOARD, REGULATOR |
| C1 | 1-123-363-00 | ELECT 470MF 50V |
| C2 | 1-123-363-00 | ELECT 470MF 50V |
| C3 | 1-130-297-00 | FILM 0.01MF 100V |
| C4 | 1-131-450-00 | TANTAL 1MF 50V |
| C5 | 1-130-297-00 | FILM 0.01MF 100V |
| C6 | 1-123-356-00 | ELECT 10MF 50V |
| C7 | 1-108-579-00 | FILM 0.01MF |
| C8 | 1-108-579-00 | FILM 0.01MF |
| C10 | 1-125-312-00 | ELECT 18000MF 35V |
| C11 | 1-131-450-00 | TANTAL 1MF 50V |
| C12 | 1-131-450-00 | TANTAL 1MF 50V |
| C13 | 1-130-297-00 | FILM 0.01MF 100V |
| C14 | 1-123-520-00 | TANTAL 22MF 16V |
| C15 | 1-123-335-00 | ELECT 330MF 25V |
| C16 | 1-123-696-00 | ELECT 470MF 25V |
| C17 | 1-123-356-00 | ELECT 10MF 35V |
| C19 | 1-161-773-00 | CERAMIC 0.01MF 25V |
| C21 | 1-108-579-00 | FILM 0.01MF |
| C22 | 1-108-579-00 | FILM 0.01MF |
| C23 | 1-108-579-00 | FILM 0.01MF |
| C24 | 1-130-297-00 | FILM 0.01MF 100V |
| C25 | 1-131-520-00 | TANTAL 22MF 16V |
| C26 | 1-161-744-00 | (AEP,UK)....CERAMIC 0.01MF 400V |
| CN1 | 1-508-743-00 | CONNECTOR 5P |
| D1 | 8-719-210-12 | DIODE 10DF2 |
| D2 | 8-719-210-12 | DIODE 10DF2 |
| D3 | 8-719-210-12 | DIODE 10DF2 |
| D4 | 8-719-210-12 | DIODE 10DF2 |
| D5 | 8-719-910-64 | DIODE HZ6B1L |
| D6 | 8-719-910-13 | DIODE HZ11A3L |
| D7 | 8-719-230-02 | DIODE 30DF2 |
| D8 | 8-719-230-02 | DIODE 30DF2 |
| D9 | 8-719-230-02 | DIODE 30DF2 |
| D10 | 8-719-230-02 | DIODE 30DF2 |
| D11 | 8-719-230-02 | DIODE 30DF2 |
| D12 | 8-719-230-02 | DIODE 30DF2 |

ELECTRICAL PARTS

| Ref.No. | Part No. | Description |
|---------|--------------|--------------------------------|
| D13 | 8-719-230-02 | DIODE 30DF2 |
| D14 | 8-719-230-02 | DIODE 30DF2 |
| D15 | 8-719-210-12 | DIODE 10DF2 |
| D16 | 8-719-210-12 | DIODE 10DF2 |
| D17 | 8-719-200-24 | (AEP,UK).....DIODE 10YD2.4 |
| D17 | 8-719-261-11 | (US,Canadian)....DIODE 10YG1.1 |
| D18 | 8-719-910-13 | DIODE HZ11A3L |
| D19 | 8-719-200-24 | (AEP,UK).....DIODE 10YD2.4 |
| D19 | 8-719-261-11 | (US,Canadian)....DIODE 10YG1.1 |
| D20 | 8-719-910-64 | DIODE HZ6B1L |
| D21 | 8-719-910-75 | DIODE HZ7B2L |
| D23 | 8-719-812-33 | DIODE TLG123 |
| D24 | 8-719-812-32 | (AEP,UK).....DIODE TLY123 |
| D24 | 8-719-812-31 | (US,Canadian)....DIODE TLR123 |
| F1 | 1-532-447-XX | FUSE 0.315A |
| F2 | 1-532-630-00 | FUSE 5A |
| F3 | 1-532-268-00 | (US,Canadian)....FUSE 2A |
| IC1 | 8-759-978-24 | IC UA78M24UC |
| IC2 | 8-759-905-55 | IC NE555N |
| IC3 | 8-759-905-34 | IC NE5534AN |
| IC4 | 8-759-135-80 | IC UPC358C |
| Q1 | 8-729-100-13 | TRANSISTOR 2SC2001 |
| Q2 | 8-729-100-13 | TRANSISTOR 2SC2001 |
| Q3 | 8-729-383-73 | TRANSISTOR 2SC2837 |
| Q4 | 8-729-141-43 | TRANSISTOR 2SD414 |
| Q5 | 8-729-113-82 | TRANSISTOR 2SA1138 |
| Q6 | 8-729-100-13 | TRANSISTOR 2SC2001 |
| R1 | 1-246-481-00 | CARBON 2.2K 1/4W |
| R2 | 1-246-515-00 | CARBON 56K 1/4W |
| R3 | 1-246-469-00 | CARBON 680 1/4W |
| R4 | 1-246-473-00 | CARBON 1K 1/4W |
| R5 | 1-246-505-00 | CARBON 22K 1/4W |
| R6 | 1-246-489-00 | CARBON 4.7K 1/4W |
| R7 | 1-246-501-00 | CARBON 15K 1/4W |
| R8 | 1-246-473-00 | CARBON 1K 1/4W |
| R9 | 1-246-457-00 | CARBON 220 1/4W |
| R10 | 1-246-501-00 | CARBON 15K 1/4W |
| R11 | 1-246-497-00 | CARBON 10K 1/4W |
| R12 | 1-246-481-00 | CARBON 2.2K 1/4W |
| R13 | 1-214-872-00 | METAL 2.2K 1/2W F |
| R14 | 1-214-872-00 | METAL 2.2K 1/2W F |
| R15 | 1-214-733-00 | METAL 1.5K 1/4W |
| R16 | 1-214-777-00 | METAL 100K 1/4W |
| R17 | 1-214-749-00 | METAL 6.8K 1/4W F |
| R18 | 1-214-830-00 | METAL 100 1/2W F |

ELECTRICAL PARTS

| Ref.No. | Part No. | Description |
|---------|--------------|-------------------------------------|
| R19 | 1-214-729-00 | METAL 1K 1/4W |
| R20 | 1-214-789-00 | METAL 0.1 |
| R21 | 1-214-749-00 | METAL 6.8K 1/4W F |
| R22 | 1-214-901-00 | METAL 33K 1/2W F |
| R23 | 1-214-830-00 | METAL 100 1/2W F |
| R24 | 1-214-876-00 | METAL 3.3K 1/2W F |
| R25 | 1-214-872-00 | METAL 2.2K 1/2W F |
| R26 | 1-214-830-00 | METAL 100 1/2W F |
| R27 | 1-214-096-00 | CARBON 33K 1/4W |
| R28 | 1-246-505-00 | CARBON 22K 1/4W |
| R29 | 1-214-069-00 | METAL 33K 1/4W |
| R30 | 1-246-497-00 | CARBON 10K 1/4W |
| S1 | 1-553-926-00 | SWITCH, PUSH |
| S2 | 1-553-856-00 | SWITCH, |
| S3 | 1-553-575-00 | (AEP,UK)....SWITCH |
| T1 | 1-447-441-00 | (AEP,UK).....TRANSFORMER, POWER |
| T1 | 1-447-440-00 | (US,Canadian)....TRANSFORMER, POWER |

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

COILS

- MMH : mH, UH : μH

The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

COILS

- MMH : mH, UH : μH

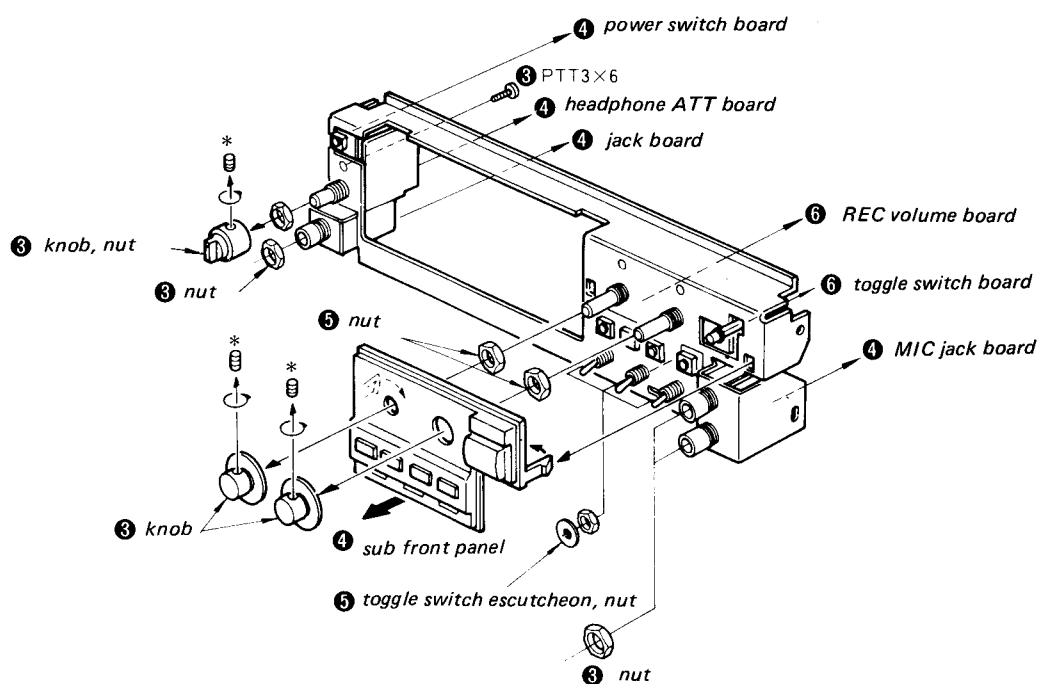
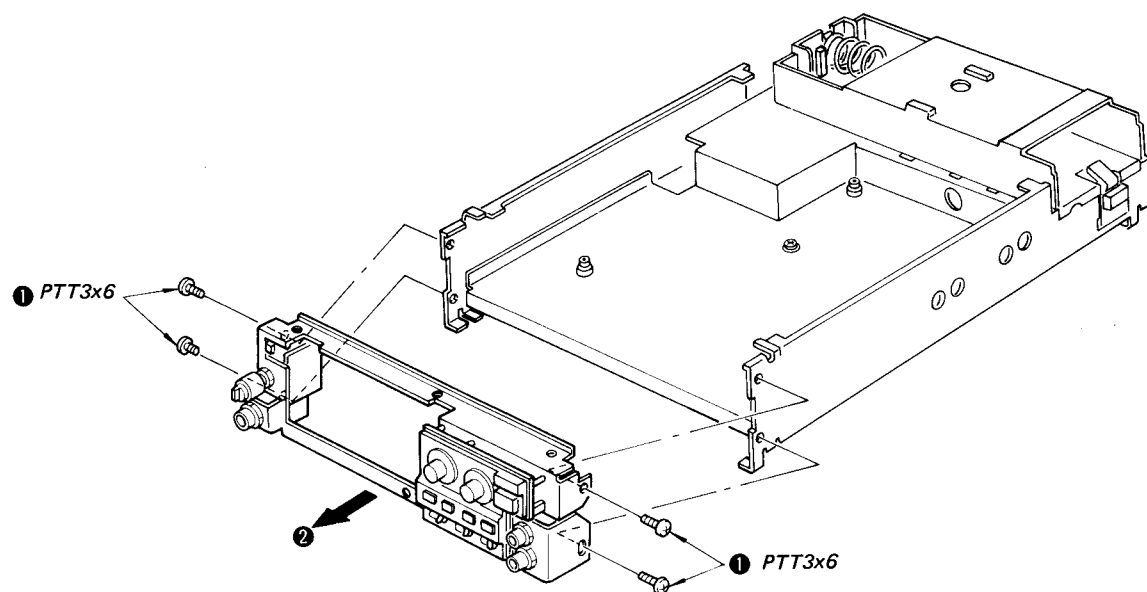
The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

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English
82102154-1
Printed in Japan

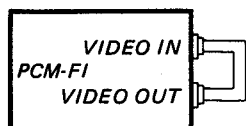
POWER SWITCH BOARD, HEADPHONE ATT BOARD, JACK BOARD
REC VOLUME BOARD, MIC JACK BOARD, TOGGLE SWITCH BOARD



* Use L-shaped wrench 1.27 mm.

SECTION 3 ELECTRICAL ADJUSTMENTS

- Switch position (Except other notice)
 - MUTING OFF
 - COPY OFF
 - INPUT LINE
 - RES 16BIT
 - HEADPHONES ATT 0 dB
- E-E mode : VIDEO-IN and VIDEO-OUT terminals are connected.



Power supply : Use AC POWER ADAPTOR-AC-700
Reference input level

| Input terminal | MIC | LINE IN | VIDEO IN |
|--------------------|---------------|--------------|----------|
| Source impedance | 300Ω | 10kΩ | 75Ω |
| Signal input level | 0.77mV(-60dB) | 0.25V(-10dB) | 1 V |

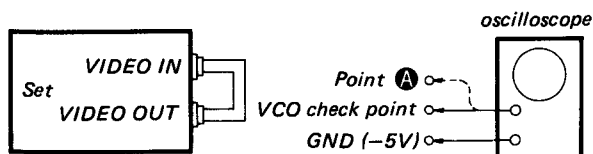
Reference output level

| Output terminal | HEADPHONES | LINE OUT | VIDEO OUT |
|---------------------|-------------|--------------|-----------|
| Load impedance | 8 Ω | 47kΩ | 75Ω |
| Signal output level | 49mV(-24dB) | 0.25V(-10dB) | 1 V |

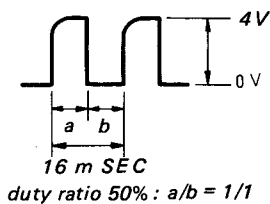
Make an adjustment after turning POWER ON more than half an hour so that the drift by temperature rise is avoided.

VCO ADJUSTMENT

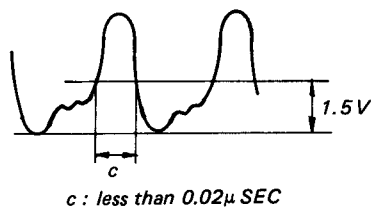
Procedure:



1. Connect VIDEO IN and VIDEO terminals (E-E mode).
2. Connect the oscilloscope to the VCO check point and GND point.
3. Adjust L505 so that duty ratio is 50%.



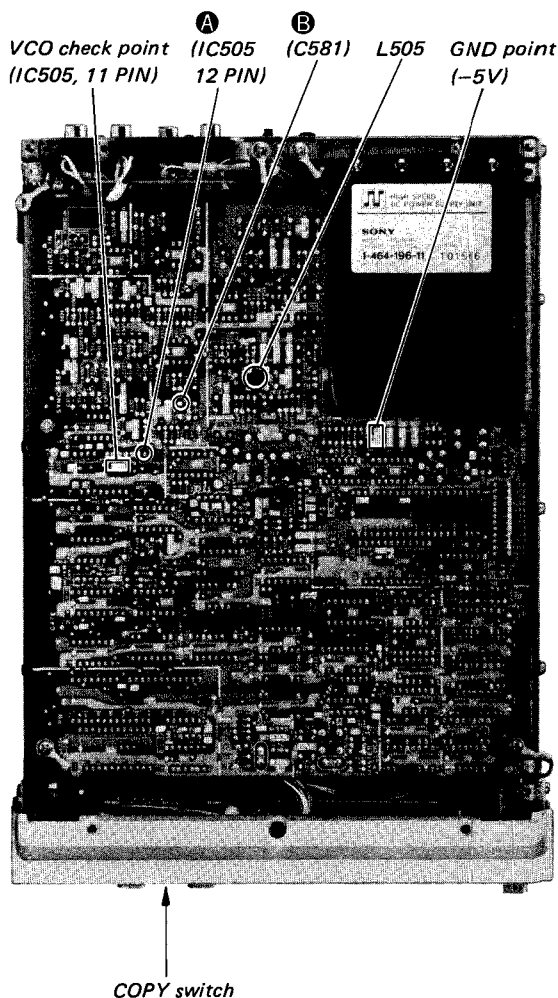
4. Turn the COPY switch to OFF→ON→OFF and then confirm the duty ratio is 50%.
5. Connect the oscilloscope to the point A and GND point.
6. Confirm the duty ratio is as shown below.



7. If c is $0.02\mu\text{Sec}$ or more, solder the point B (C581 is connected).

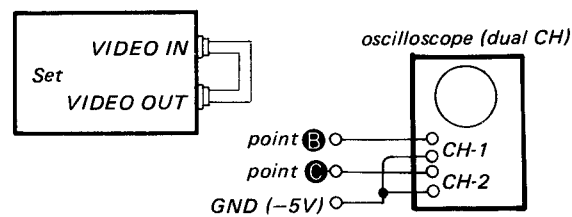
Adjustment Location:

— DIGITAL board —

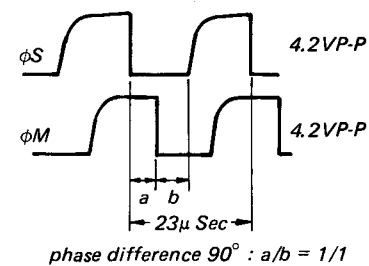


PAL CLOCK ADJUSTMENT (Only PAL/SECAM system)

Procedure :

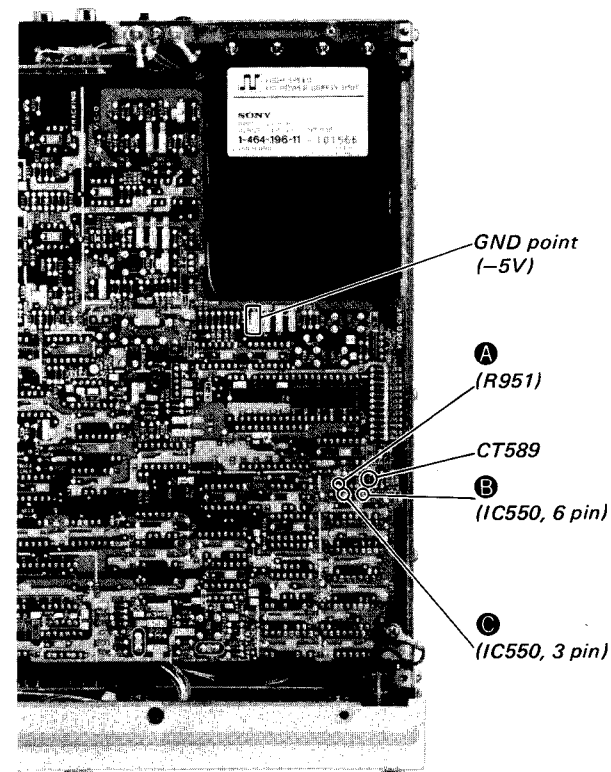


1. Connect VIDEO IN and VIDEO OUT terminals (E-E mode).
2. Solder the point A (R951 is connected).
3. Connect the oscilloscope to the point B (IC550, 6 pin) and point C (IC550, 3 pin).
4. Adjust CT589 so that the phase difference is 90° .



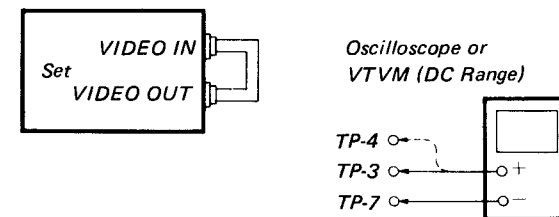
5. Unsolder the point A (R951)

Adjustment Location :
- DIGITAL board -



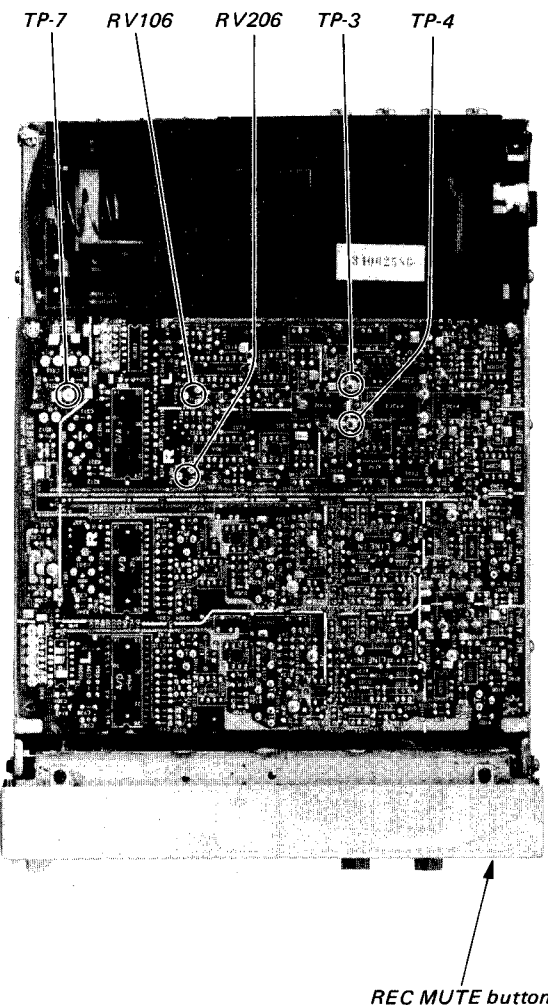
D/A OFFSET ADJUSTMENT

Procedure :



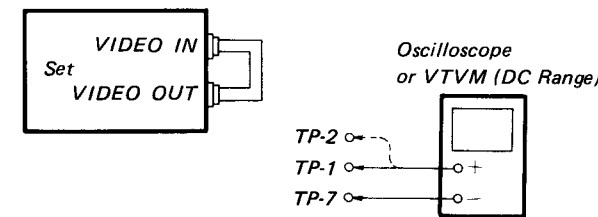
1. Connect VIDEO-IN and VIDEO-OUT terminals (E-E MODE).
2. Connect the oscilloscope or VTVM (DC Range) to the test point TP-3 (L-CH)/TP-4 (R-CH) and TP-7 (ground point).
3. Adjust RV106 (L-CH)/RV206 (R-CH) with pressing the REC MUTE button for $0\pm 10\text{ mV}$ (DC) reading on oscilloscope or VTVM.

Adjustment Location :
- ANALOG board -



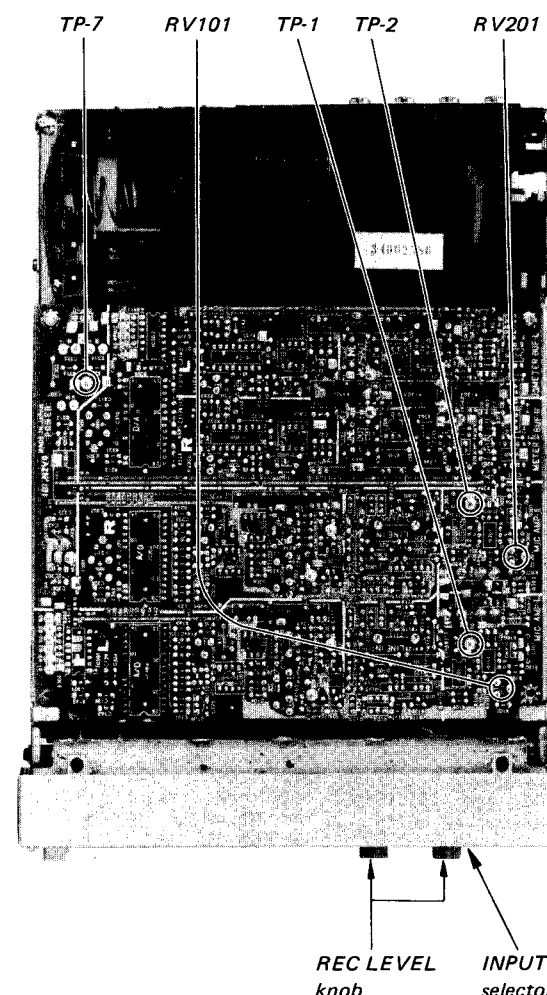
MIC AMP OFFSET ADJUSTMENT

Procedure :



1. Connect the oscilloscope or VTVM (DC Range) to the test point TP-1 (L-CH)/TP-2 (R-CH) and TP-7 (ground point).
2. Turn the INPUT selector to MIC and the REC LEVEL knobs to the minimum (0).
3. Adjust RV101 (L-CH) / RV206 (R-CH) for $0\pm 50\text{ mV}$ (DC) reading on oscilloscope or VTVM.

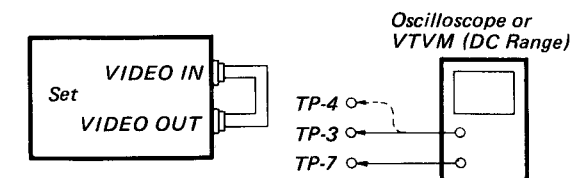
Adjustment Location :
- ANALOG board -



A/D OFFSET ADJUSTMENT

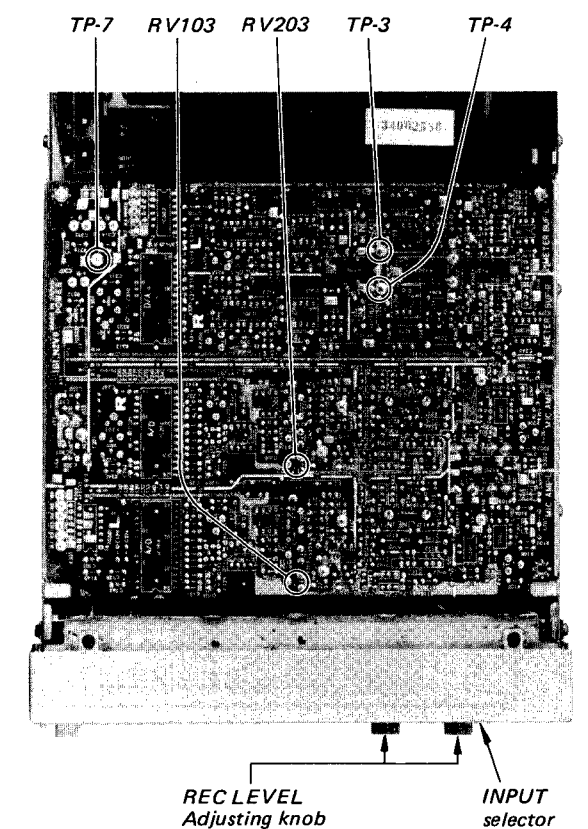
A/D OFFSET ADJUSTMENT should be made later than that of D/A OFFSET

Procedure :



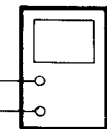
1. Connect VIDEO-IN and VIDEO-OUT TERMINALS (E-E MODE).
2. Connect the oscilloscope or VTVM (DC Range) to the test point TP-3 (L-CH), TP-4 (R-CH), and TP-7 (ground point).
3. Turn the INPUT selector to the LINE and the REC LEVEL knobs to the minimum (0).
4. Adjust RV103 (L-CH)/RV203 (R-CH) for $0\pm 10\text{ mV}$ (DC) reading on oscilloscope or VTVM.

Adjustment Location :
- ANALOG board -



be made

illoscope or
VM (DC Range)



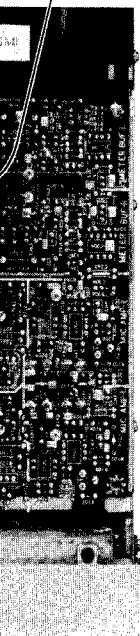
OUT TERMI-

VM (DC Range)
P-4 (R-CH), and

LINE and the
um (0).

-CH) for 0±
ope or VTVM.

TP-4

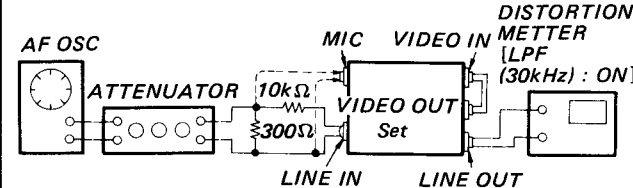


INPUT
selector

A/D DISTORTION ADJUSTMENT

The low distortion AF OSC and the low distortion measurement equipment are needed to make this adjustment.

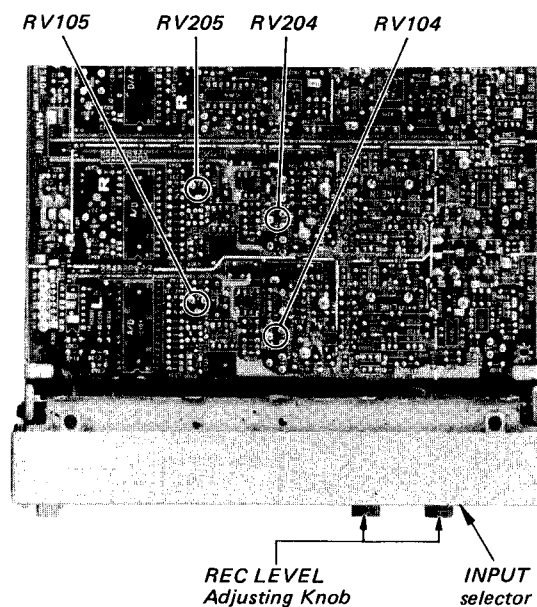
Procedure:



1. Connect VIDEO-IN and VIDEO-OUT terminals (E-E mode).
 2. Apply a 1 kHz, 0 dB (0.775V) to the LINE IN terminals.
 3. Adjust the REC LEVEL knobs so that OVER of the LED peak program meters just light up.
 4. Decrease the input signal level from 0.5 to 1 dB with the attenuator, and confirm OVER of that goes out.
 5. Adjust RV104, 105(L-CH)/RV204, 205(R-CH) for minimum reading on distortion meter.
 6. And then apply a 1 kHz, -20dB (0.775V) to the MIC terminals.
 7. Confirm the distortion similarly.
- reference data
distortion LINE INless than -84dB
MICless than -80dB

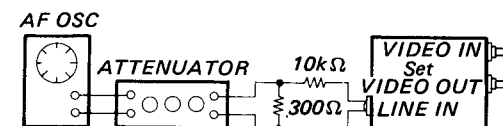
Adjustment Location:

- ANALOG board -



PEAK METER ADJUSTMENT

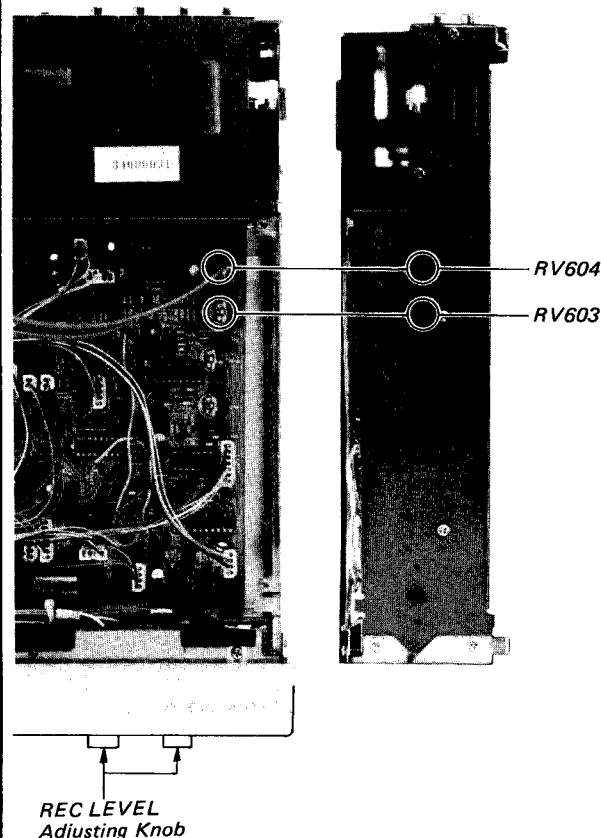
Procedure:



1. Connect VIDEO IN and VIDEO OUT terminals (E-E mode).
2. Apply a 1kHz, 0dB (0.775V) to the LINE IN terminals.
3. Adjust the REC LEVEL knobs so that OVER of the LED peak program meters just light up.
4. Decrease the input signal level from 0.5 to 1dB with the attenuator, and confirm OVER of that goes out.
5. Adjust RV604(L-CH)/RV603(R-CH) so that the LED peak program meters just illuminate 0dB.

Adjustment Location:

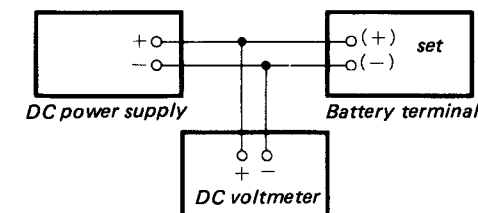
- POWER SUPPLY board -



BATT LEVEL ADJUSTMENT

Remove the AC power adapter during this adjustment.

Procedure:



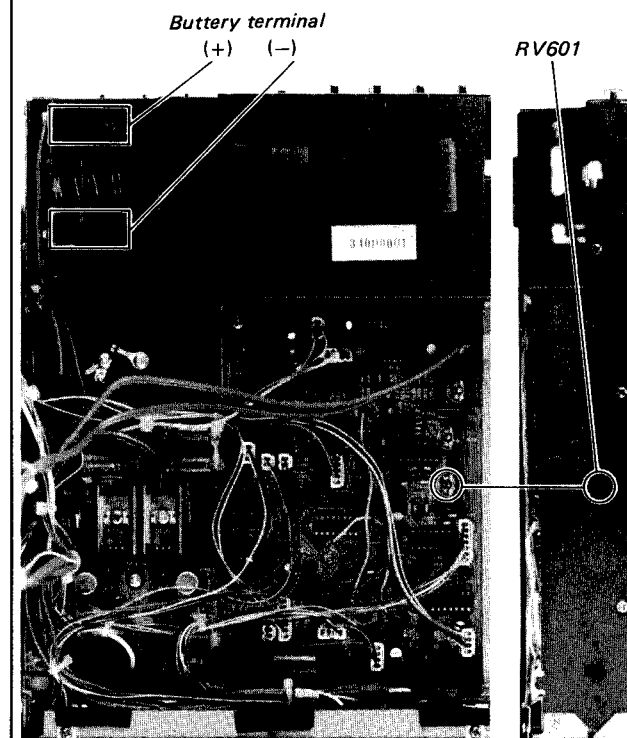
1. Adjust the output voltage of the DC power supply to 11 \pm 0.1 V and connect to the battery terminals of the set.
2. Turn the POWER switch to on and press the BATT CHECK button.
3. Confirm the LED peak program meter illuminates only L-CH.
4. Adjust RV601 with pressing the BATT CHECK button so that the LED meter illuminates shown as below.

BATT CHECK E



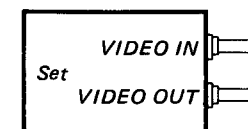
Adjustment Location:

- POWER SUPPLY board -

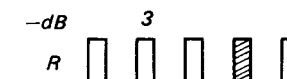


TRACKING LEVEL ADJUSTMENT

Procedure:

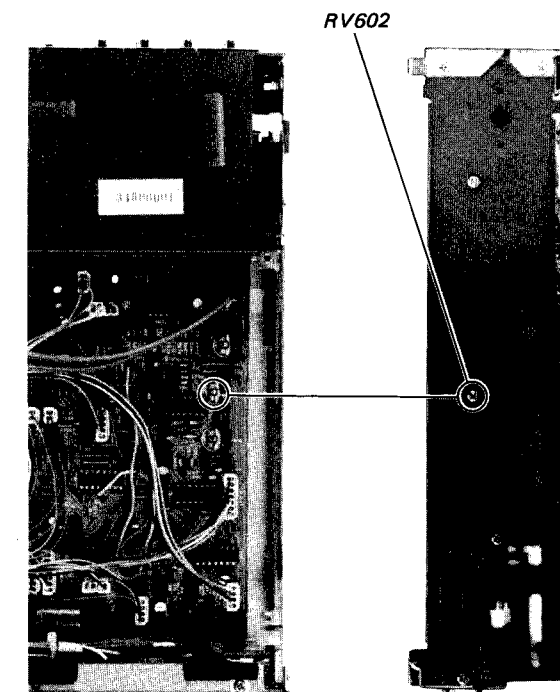


1. Connect VIDEO IN and VIDEO OUT terminal (E-E mode).
2. Press the METER selector button.
3. Confirm the TRACKING indicator illuminates and the LED peak program meter illuminates only R-CH.
4. Adjust RV602 so that the LED meter illuminates shown as below.



Adjustment Location:

- POWER SUPPLY board -



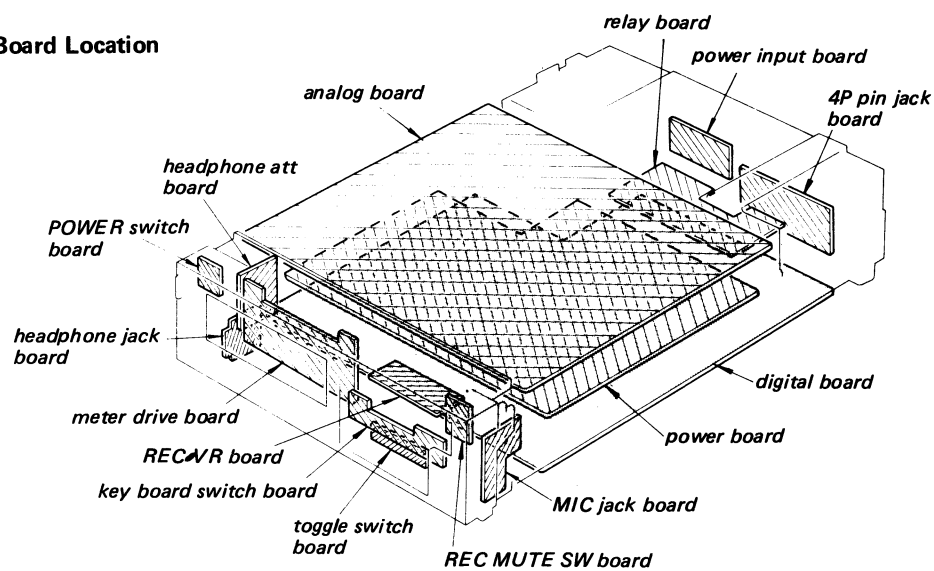
SECTION 4 DIAGRAMS

Semiconductor Lead Layouts

| | | | | | |
|---|---|--|--|---|--------------------------|
| NE564N 74LS169PC CX7914 CX890 CX899 μPC319C μPC4557C μPC4558C μPD652C030 μPD785C μPD4584BC MSM4050RS MSM4053RS MSM512812RS NE5534AN NJM2903D NJM4556D SN74ALS02N SN74ALS04N SN74LS27N SN74ALS74N SN74LS157N SN74LS163AN SN74LS164N SN7406N TC40H002P TC40H008P TC40H032P TC40H074P TC40H164P TC40H367P TC40H393P TC4001BP TC4011BP TC40163BP TC4024BP TC4027BP TC4029BP TC4050BP TC4066BP TC4093BP TC4528BP TM4505P TL071CP TL072CP | μPC78L15 μA79M05 LF353H LF356H LF357H (Bottom view) 2SA733 2SC945 2SC1364 | 2SA939 2SC2071 letter side 2SA985A 2SB719 2SC2275 2SD759 2SA1027R 2SA1138 2SC2676 2SD774 2SC710 | 2SC1129 2SC2021 2SK107 2SK246 2SK152 2SK244 | 2SK245 D1 D2 G1 G2 S1 S2 10E2 10YD1.3B 10YD2.4A 10YD4.5B 10YD0.6 1SS119 1SS133 ERC81-004 HZ5C1 HZ6A1L HZ6B1L HZ6B2L HZ7B2L HZ9B3L HZ18-2L EQA01-06R2 AA3432S FC54M | SV02 anode cathode |
|---|---|--|--|---|--------------------------|

(Top view)

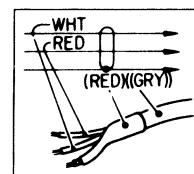
Circuit Board Location



4-1. MOUNTING DIAGRAM —Conductor Side—

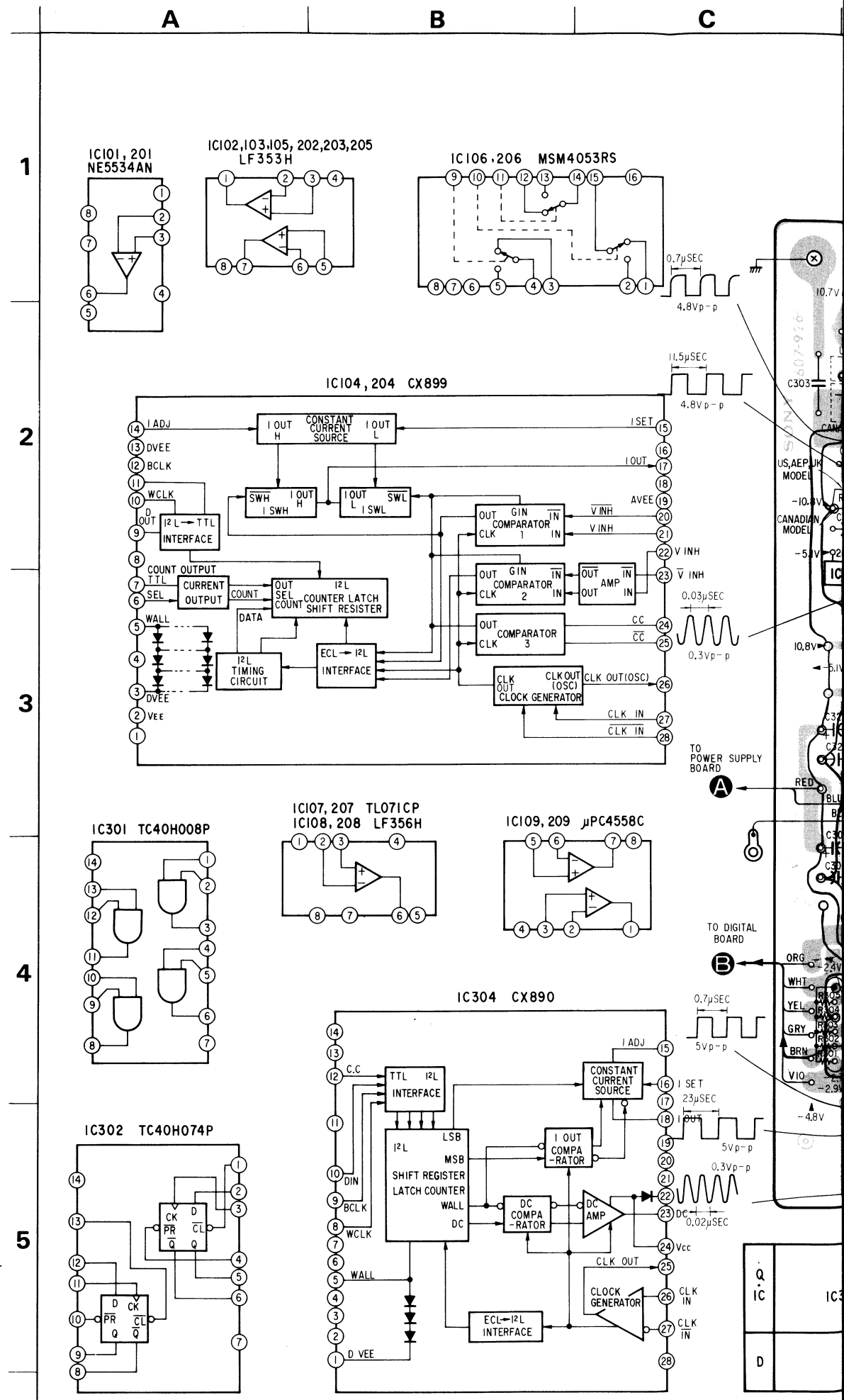
Note:

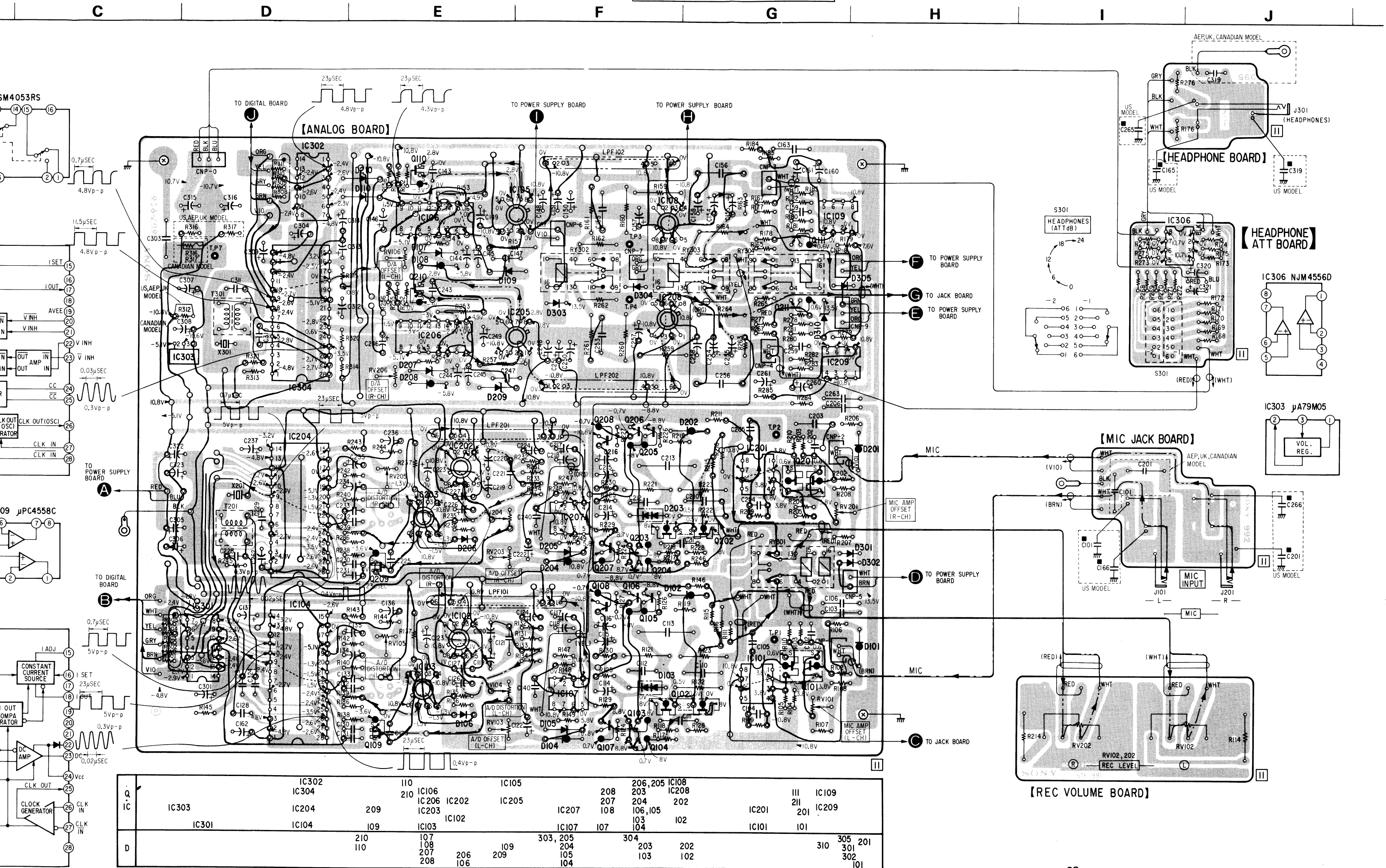
- Color code of sleeving over the end of the jacket.



- — : parts extracted from the component side.
- — : parts extracted from the conductor side.
- : part mounted on the conductor side.
- — ○ : pattern connection on the component side.
- : B + pattern

- : signal path
- : L-CH signal path
- : R-CH signal path

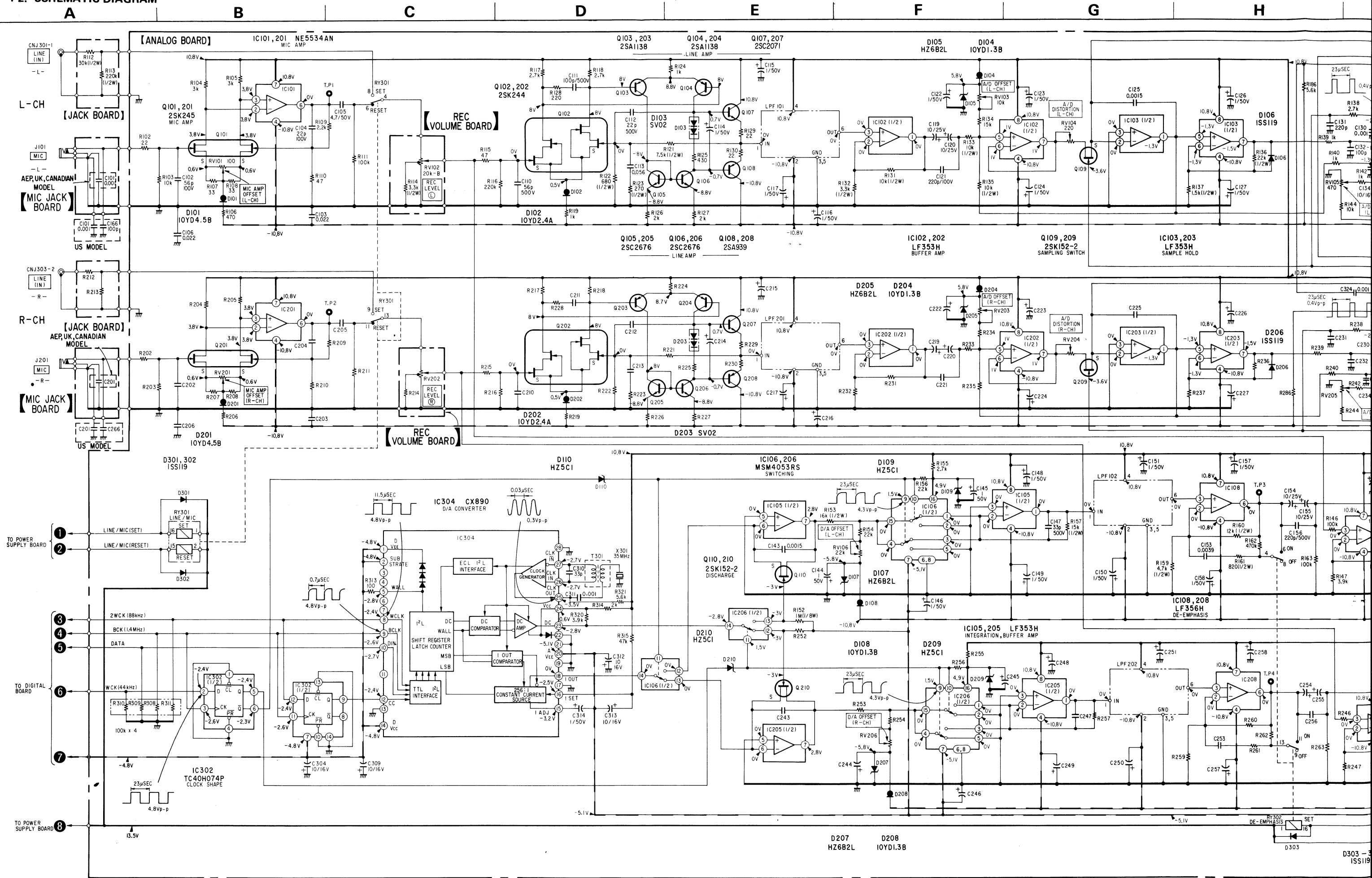


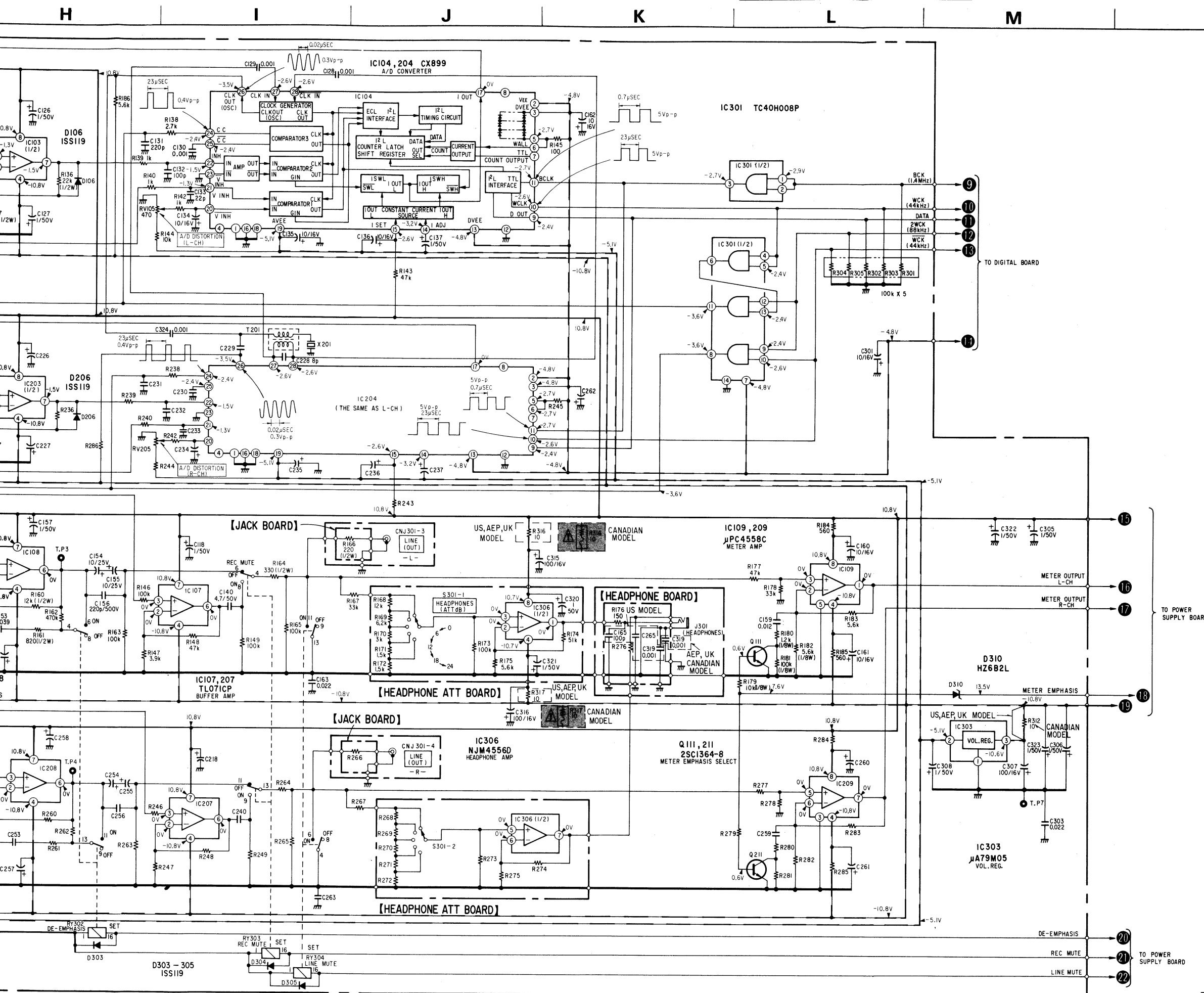


4-2. SCHEMATIC DIAGRAM

Semiconductor Lead Layouts: See Page 25.
Circuit Board Location: See page 25.

PCM-F1 PCM-F1





Note:

- Switch, relay

| Ref. No. | Switch | Position |
|----------|------------------------|----------|
| S301 | HEADPHONES ATTdB | 0 |
| S601 | MUTING | OFF |
| S602 | COPY | OFF |
| S603 | INPUT | MIC |
| S604 | METER | OFF |
| S605 | PEAK HOLD RESET/AUTO | OFF |
| S606 | PEAK HOLD RESET/MANUAL | OFF |
| S607 | BATT CHECK | OFF |
| S608 | REC MUTE | OFF |
| S609 | POWER | OFF |
| S600 | RES | 14BIT |
| RY301 | LINE/MIC | MIC |
| RY302 | De-emphasis | OFF |
| RY303 | REC MUTE | OFF |
| RY304 | Line mute | OFF |
| RY601 | AC/DC | AC |
| RY602 | POWER | ON |
| RY603 | Charge | ON |

- : panel designation.

- All resistors are in ohms, $\frac{1}{8}W$ unless otherwise noted.
k Ω : 1000 Ω , M Ω : 1000 k Ω

- All capacitors are in μF unless otherwise noted. pF : $\mu\mu F$
50WV or less are not indicated except for electrolytics and tantalums.

- : fusible resistor.

- : adjustment for repair.

- : B+ bus.

- : B- bus.

- Voltages are dc with respect to ground unless otherwise noted.

- Readings are taken under E-E mode, no-signal conditions with a VOM (50 k Ω/V).

- Voltage/waveforms are measured with a wide-band oscilloscope.

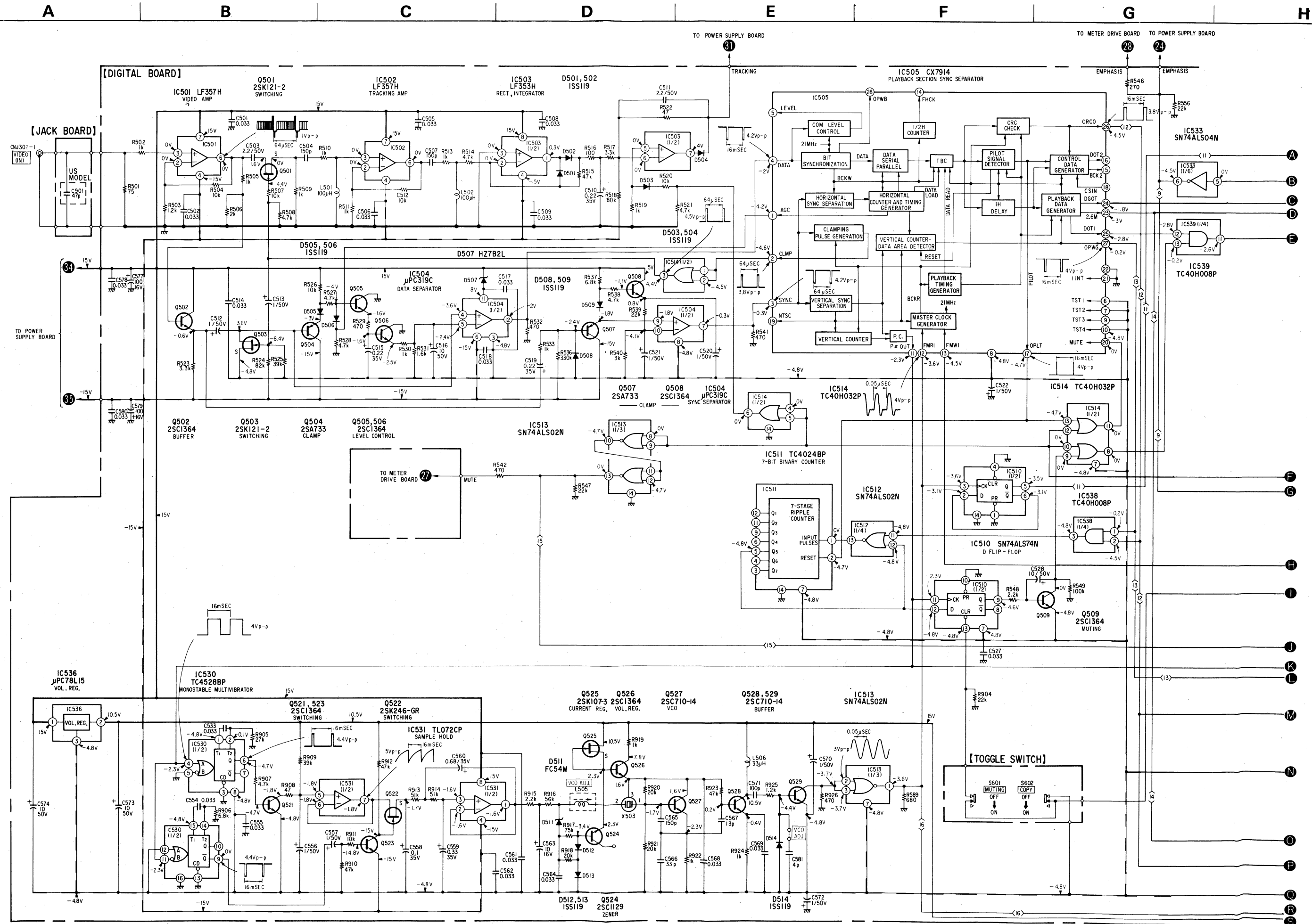
Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

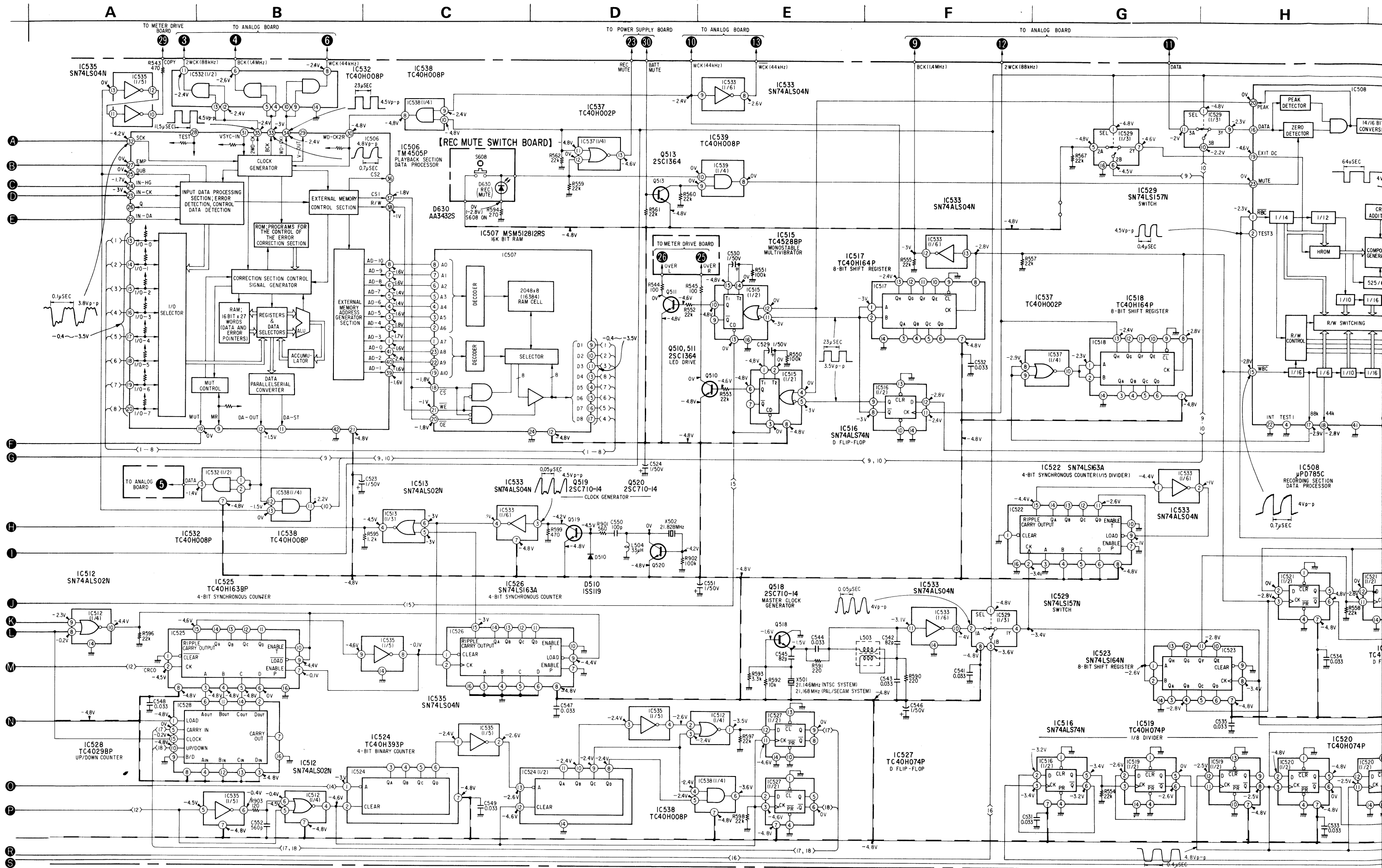
2-4. SCHEMATIC DIAGRAM

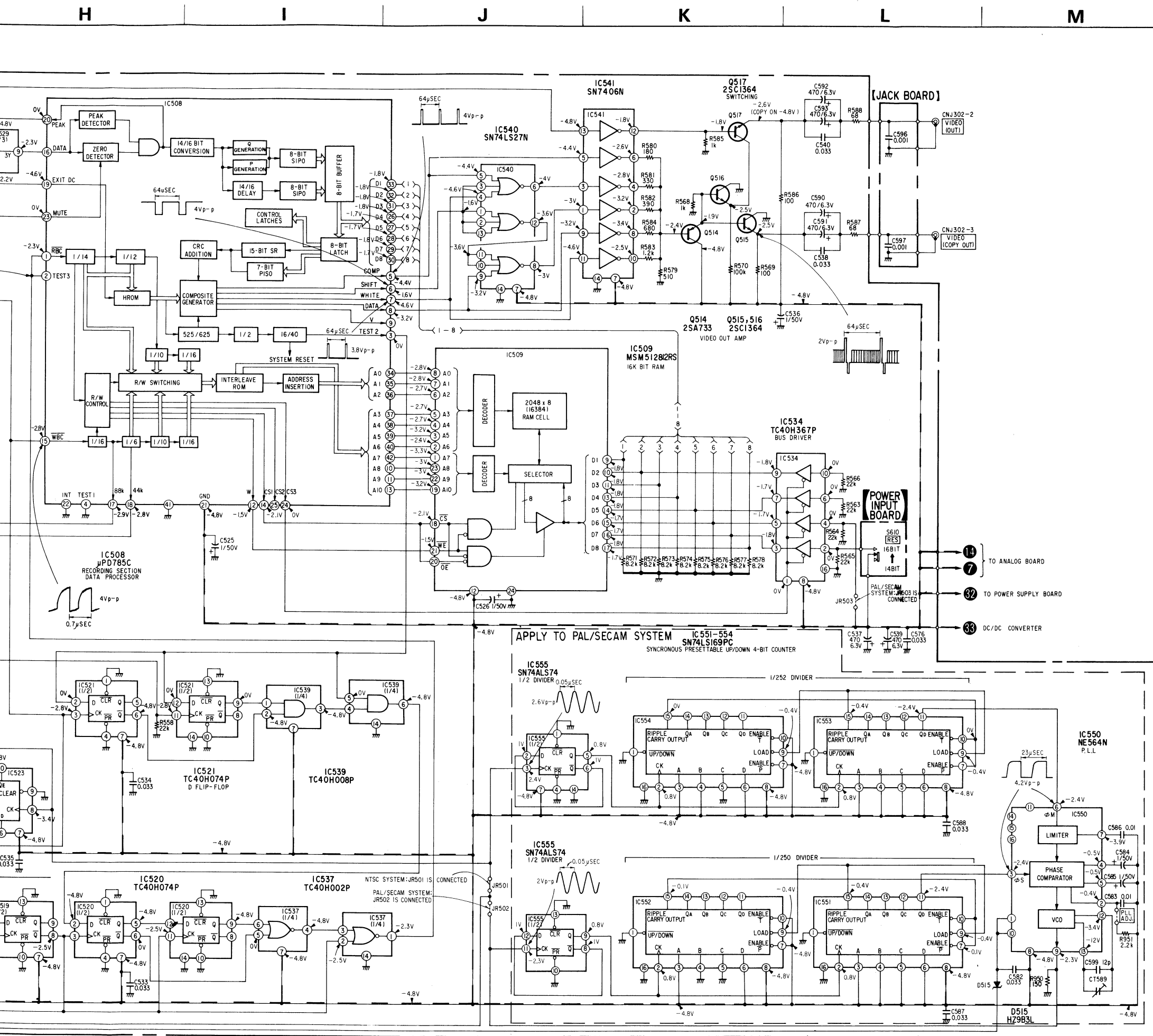
Semiconductor Lead Layouts: See Page 25.
Circuit Board Location: See page 25.

PCM-F1 PCM-F1



PCM-F1 PCM-F1



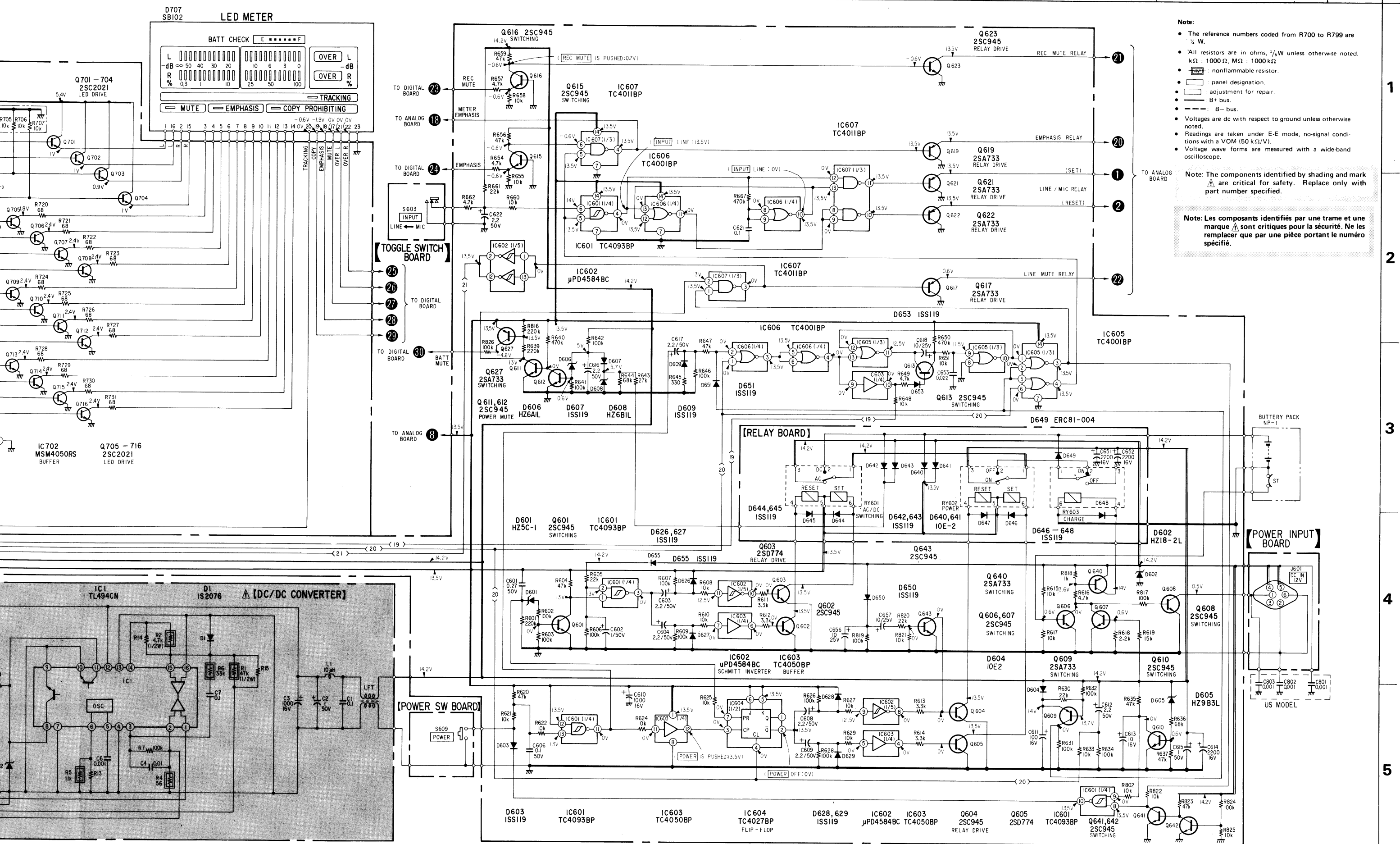


Note:

- All capacitors are in μF unless otherwise noted. $pF : \mu\mu F$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, $\frac{1}{4}W$ unless otherwise noted. $k\Omega : 1000\Omega$, $M\Omega : 1000k\Omega$
- : panel designation.
- : adjustment for repair.
- : B+ bus.
- : B- bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under E-E mode, no-signal conditions with a VOM (50 $k\Omega/V$).
- Voltage/waveforms are measured with a wide-band oscilloscope.

H



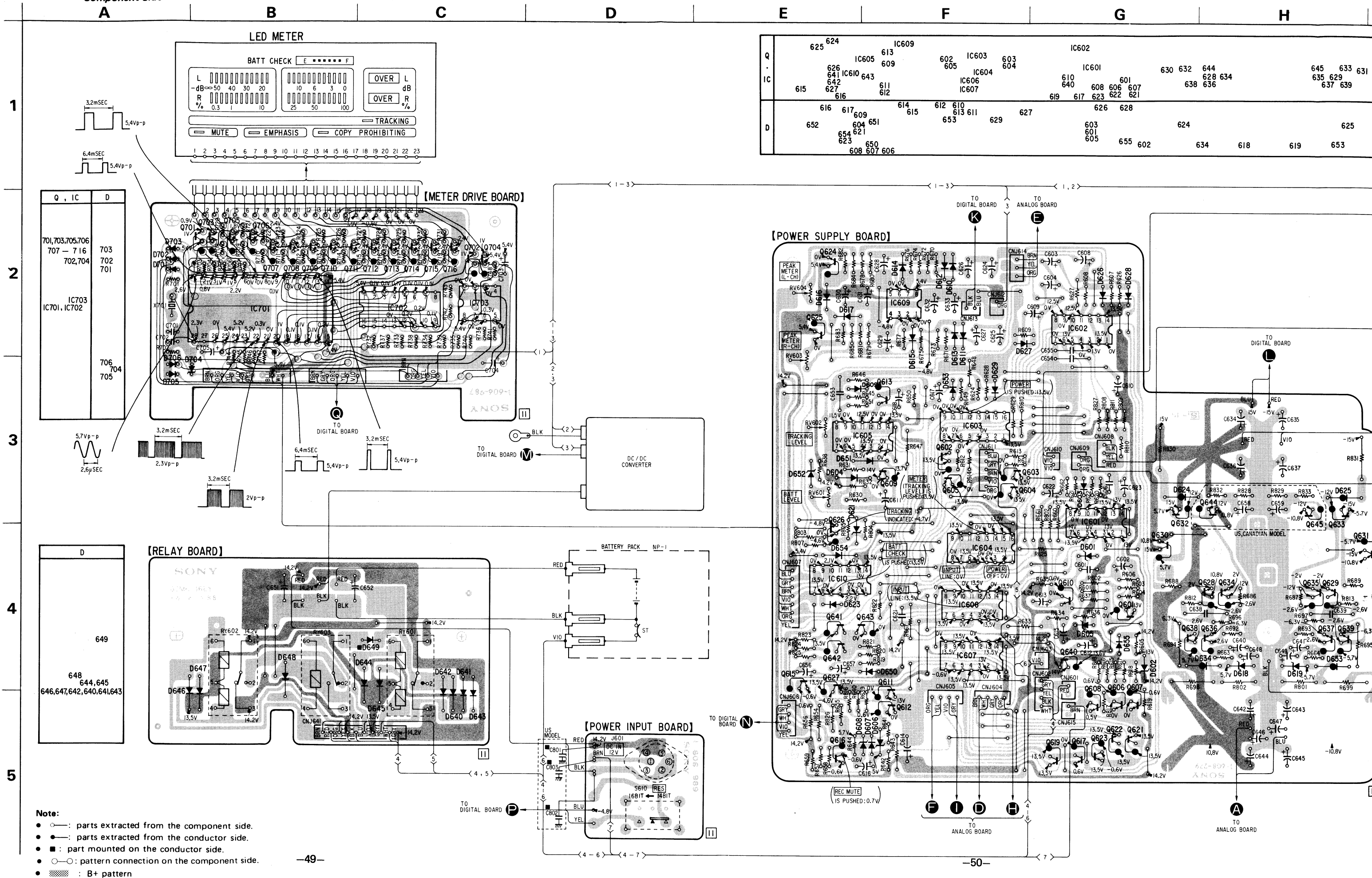


- Note:**
- The reference numbers coded from R700 to R799 are 1/4 W.
 - All resistors are in ohms, 1/4 W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ.
 - Nonflammable resistor.
 - Panel designation.
 - Adjustment for repair.
 - B+ bus.
 - B- bus.
 - Voltages are dc with respect to ground unless otherwise noted.
 - Readings are taken under E-E mode, no-signal conditions with a VOM (50 kΩ/V).
 - Voltage wave forms are measured with a wide-band oscilloscope.
- Note:** The components identified by shading and mark are critical for safety. Replace only with part number specified.
- Note:** Les composants identifiés par une trame et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

4-6. MOUNTING DIAGRAM —Component Side—

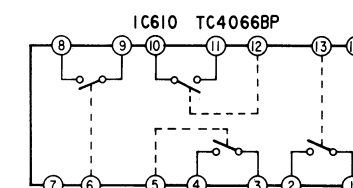
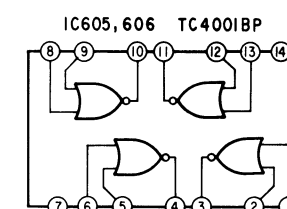
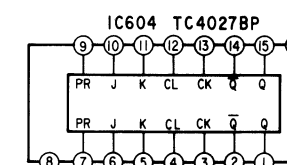
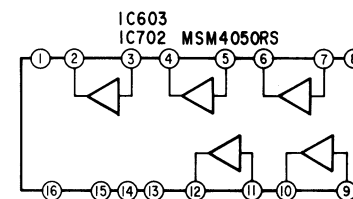
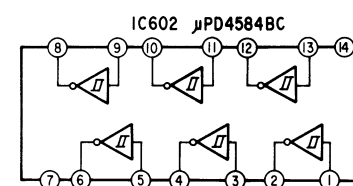
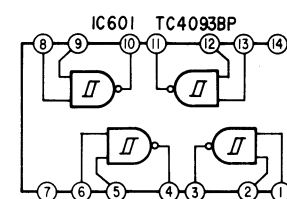
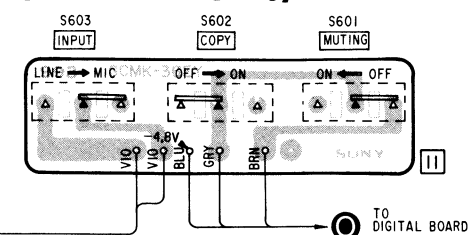
Semiconductor Lead Layouts: See Page 25.
Circuit Board Location: See page 25.

PCM-F1 PCM-F1

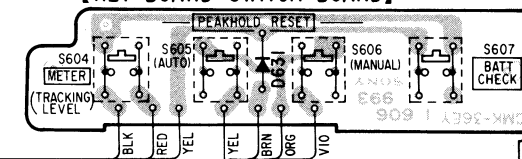


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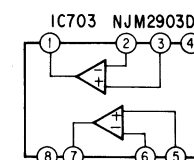
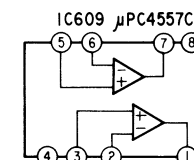
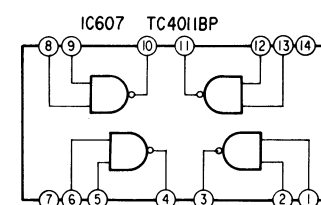
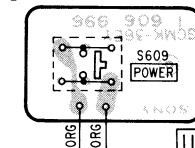
【TOGGLE SWITCH BOARD】



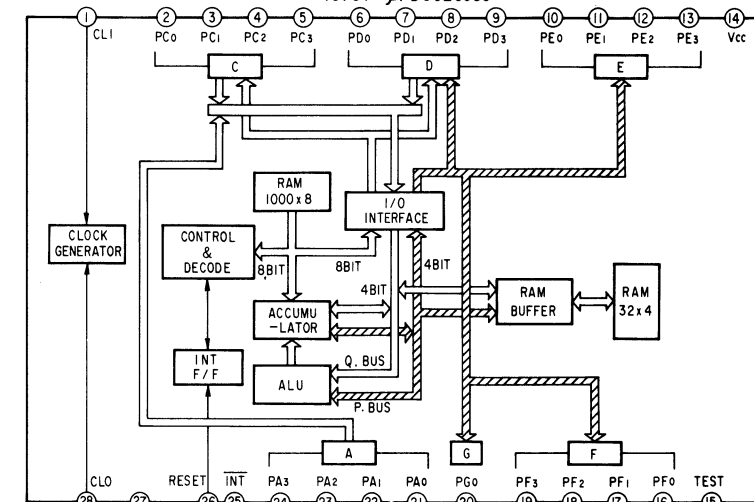
【KEY BOARD SWITCH BOARD】



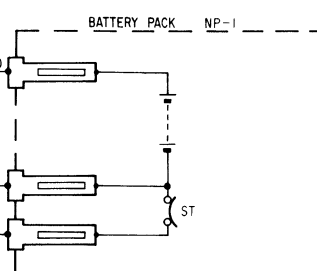
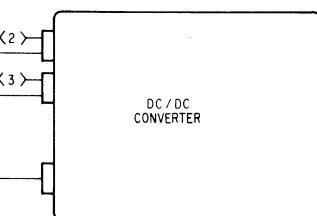
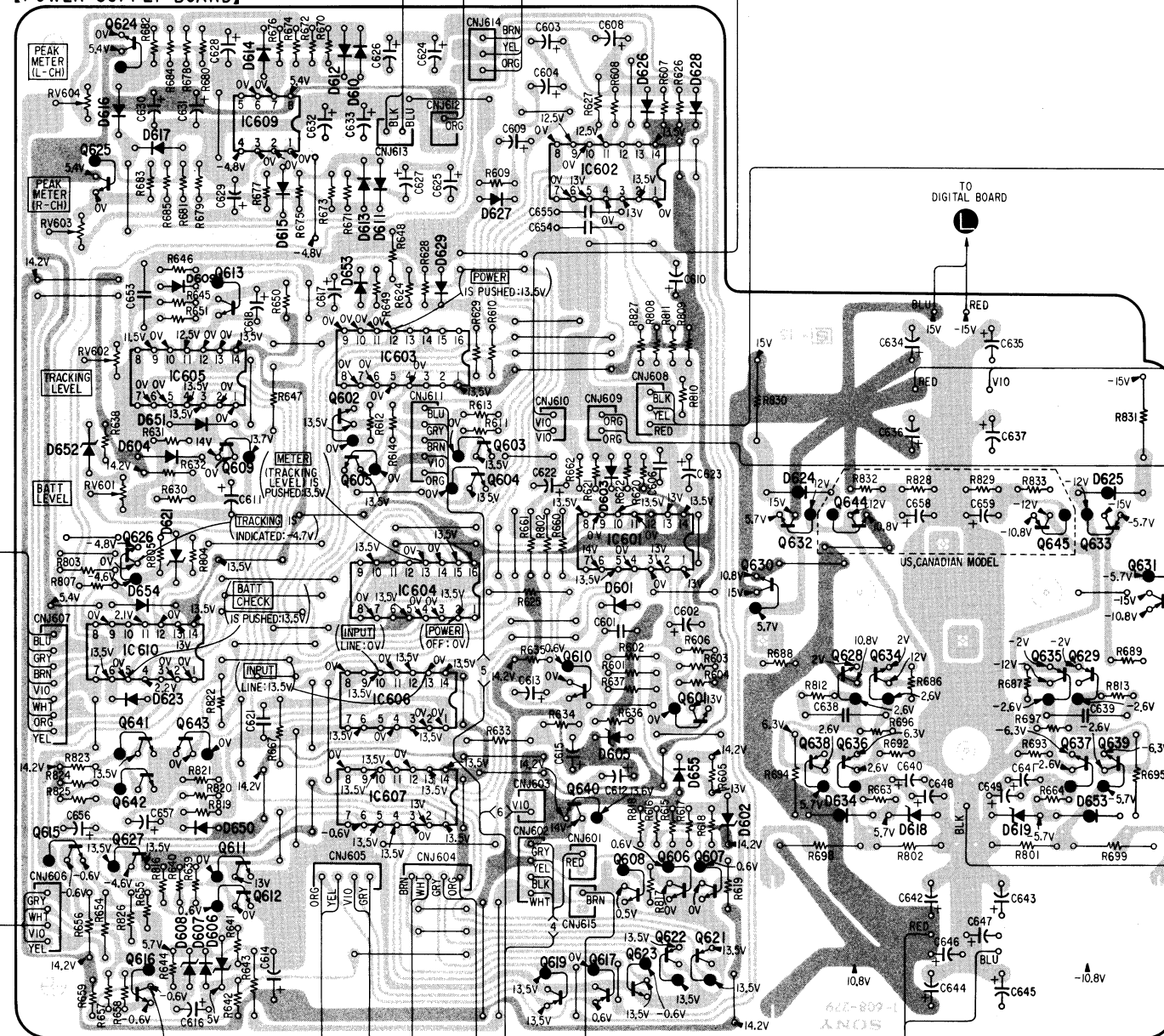
【POWER SW BOARD】



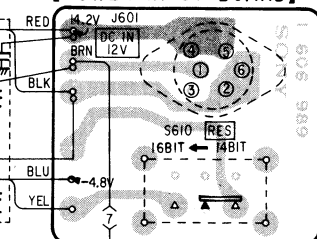
IC701 PD652C030 ۛ



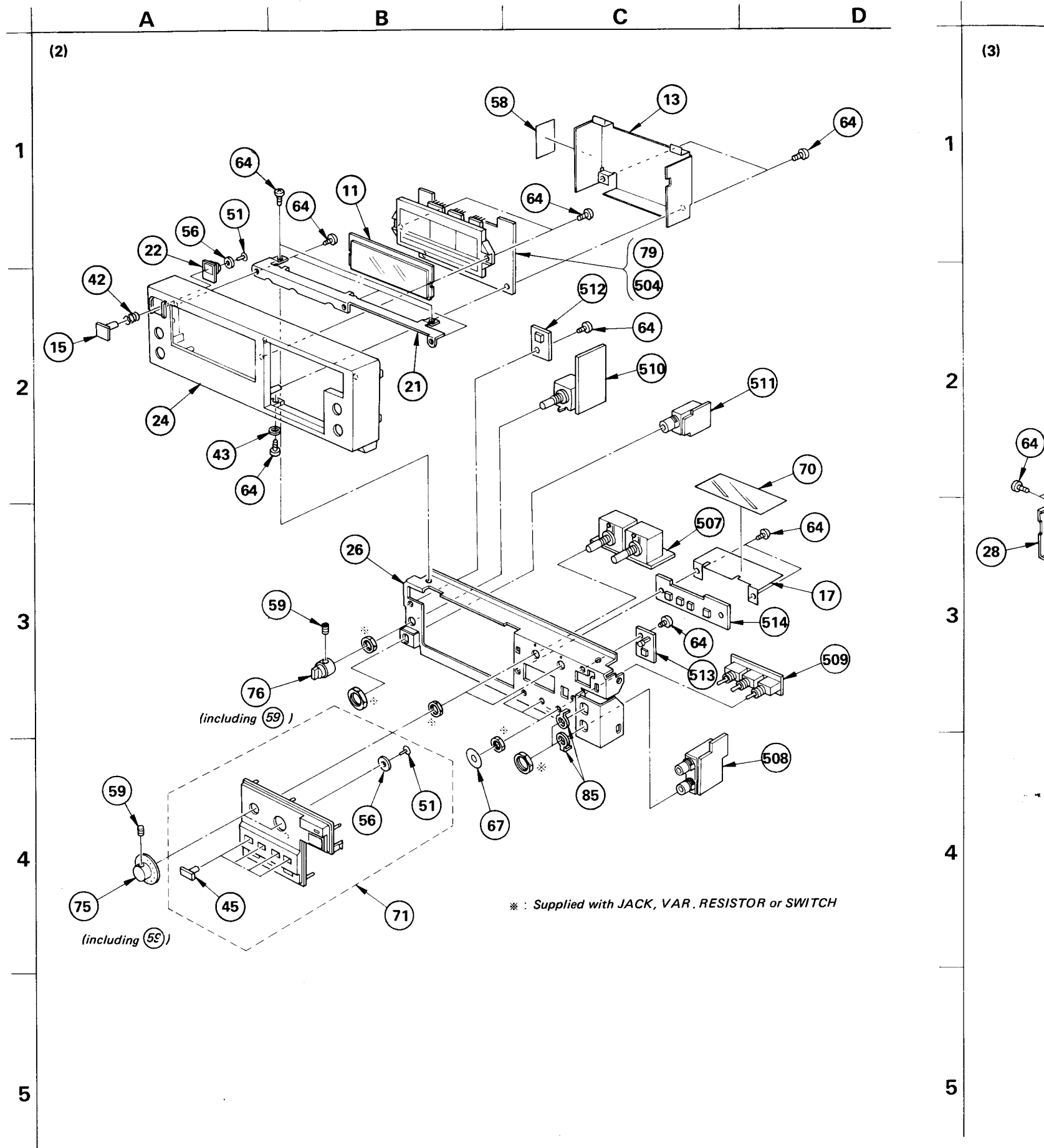
【POWER SUPPLY BOARD】

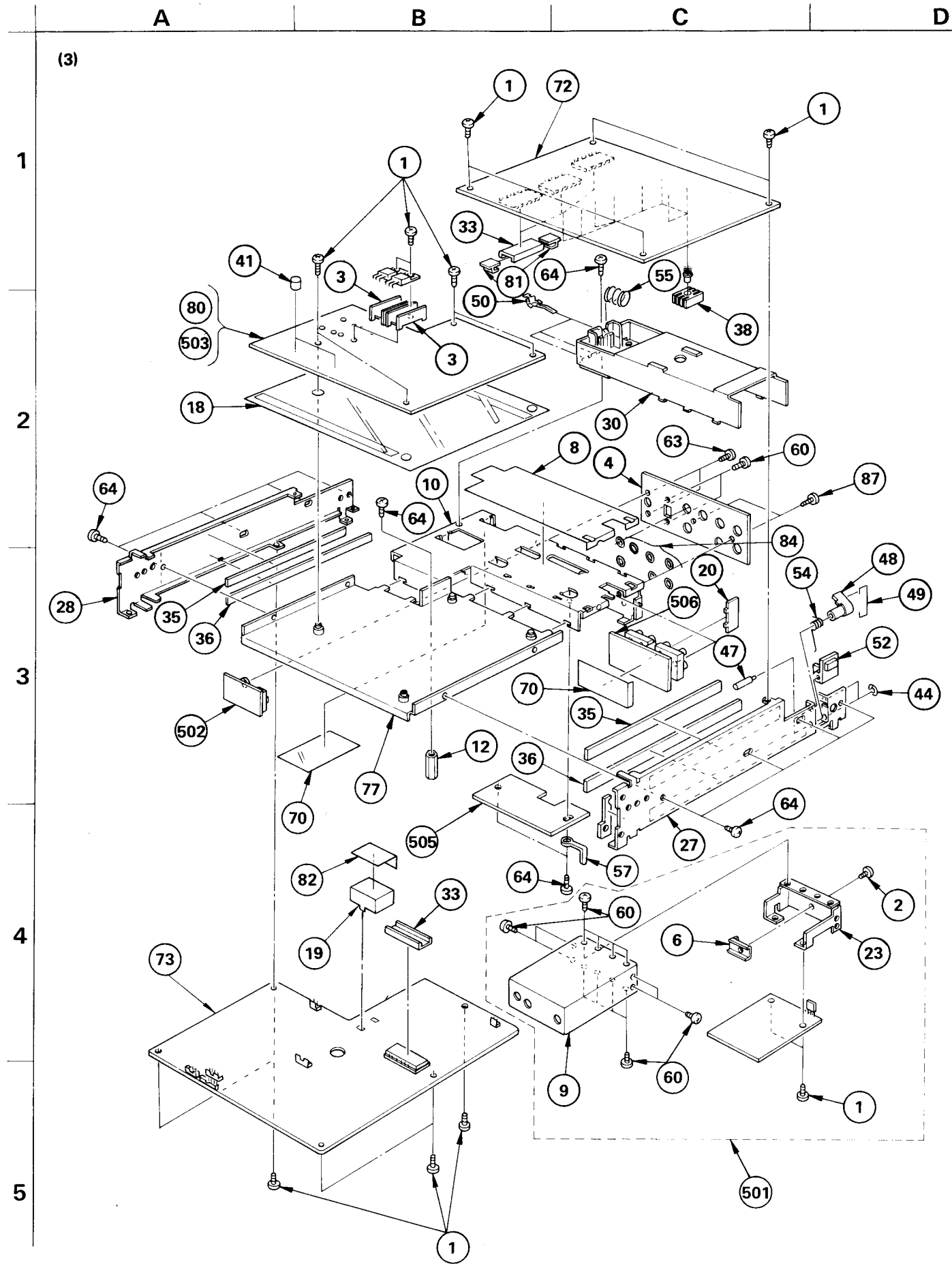
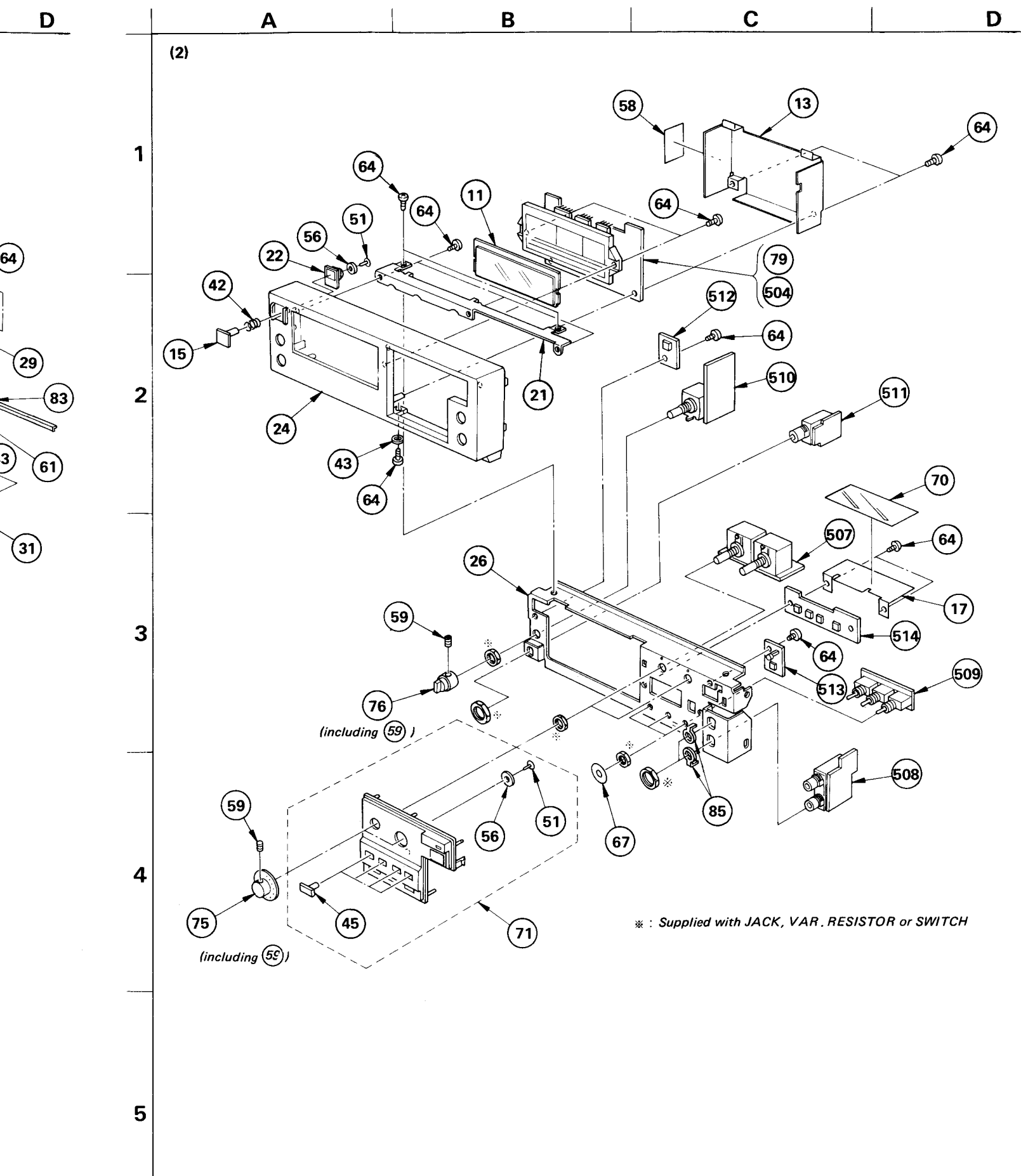


【POWER INPUT BOARD】



SECTION 5





PCM-F1 PCM-F1

GENERAL SECTION

| No. | Part No. | Description |
|-----|--------------|--|
| 1 | 2-259-121-00 | SCREW, TR |
| 2 | 2-259-121-21 | SCREW, TR |
| 3 | 2-362-302-00 | HEAT SINK, HORIZONTAL, TO-126 |
| 4 | 2-362-303-02 | PLATE, JACK |
| 5 | 2-362-305-00 | INSULATOR, SHIELD PLATE, LOWER |
| 6 | 2-362-308-00 | CLAMP, TRANSISTOR |
| 7 | 2-362-309-00 | PLATE (LOWER), SHIELD |
| 8 | 2-362-310-00 | SHEET, BATTERY |
| 9 | 2-362-311-00 | CASE, PLPS |
| 10 | 2-362-312-00 | CHASSIS, REAR |
| 11 | 2-362-315-00 | WINDOW, METER |
| 12 | 2-362-318-00 | SUPPORT, BOTTOM PLATE |
| 13 | 2-362-319-00 | PLATE, SHIELD, METER |
| 14 | 2-362-320-00 | (Canadian,AEP,UK)...CUSHION, BOTTOM PLATE |
| 14 | 2-362-320-11 | (US).....CUSHION, BOTTOM PLATE |
| 15 | 2-362-321-00 | BUTTON, POWER |
| 16 | 2-362-324-00 | SHAFT, BATTERY LID |
| 17 | 2-362-326-00 | PLATE, SHIELD, REC CONTROL |
| 18 | 2-362-327-00 | INSULATOR, SHIELD PLATE, CENTER |
| 19 | 2-362-376-00 | CASE (2), SHIELD, VCO |
| 20 | 2-362-331-00 | PLATE, SHIELD, JACK |
| 21 | 2-362-334-00 | BRACKET, PANEL |
| 22 | 2-362-335-00 | ESCUTCHEON, POWER SWITCH |
| 23 | 2-362-336-00 | PLATE |
| 24 | 2-362-337-11 | (PAL/SECAM)...PANEL, FRONT |
| 24 | 2-362-337-00 | (NTSC).....PANEL, FRONT |
| 25 | 2-362-339-00 | (Canadian,AEP,UK)...PLATE, BOTTOM |
| 25 | 2-362-339-11 | (US).....PLATE, BOTTOM |
| 26 | 2-362-340-00 | CHASSIS, AMPLIFIER |
| 27 | 2-362-341-00 | PLATE (RIGHT), SIDE |
| 28 | 2-362-342-00 | PLATE (LEFT), SIDE |
| 29 | 2-362-344-00 | ESCUTCHEON, BATTERY |
| 30 | 2-362-345-00 | HOLDER, BATTERY |
| 31 | 2-362-347-00 | (Canadian,AEP,UK)...PANEL, REAR |
| 31 | 2-362-347-11 | (US).....PANEL, REAR |
| 32 | 2-362-373-00 | LABEL, MODEL NUMBER (US,AEP) |
| 33 | 2-362-355-00 | HEAT SINK, IC |
| 34 | 2-362-358-11 | MANUAL, INSTRUCTION |
| 35 | 2-362-359-00 | PLATE, VIBRATION CONTROL |
| 36 | 2-362-360-00 | PLATE, VIBRATION CONTROL |
| 37 | 2-362-362-00 | PLATE, VIBRATION CONTROL |
| 38 | 2-362-364-00 | HEAT SINK, OPERATION AMPLIFIER |
| 38 | 2-362-364-11 | HEAT SINK, OPERATION AMPLIFIER (for IC103) |
| 39 | 2-362-365-00 | FOOT, RUBBER |
| 40 | 2-362-370-01 | INSULATOR, MICROPHONE JACK |

GENERAL SECTION

| No. | Part No. | Description |
|-----|--------------|-----------------------------------|
| 41 | 2-362-372-00 | CAP (CK) |
| 42 | 3-434-052-00 | SPRING, COMPRESSION |
| 43 | 3-558-708-21 | WASHER, STOPPER |
| 44 | 3-570-615-00 | POLY-WASHER (DIA.1.2) |
| 45 | 3-669-492-00 | BUTTON (A), F |
| 46 | 3-669-517-11 | (US,Canadian)...LID, BATTERY CASE |
| 46 | 3-669-517-41 | (AEP,UK).....LID, BATTERY CASE |
| 47 | 3-669-523-00 | SHAFT (C) |
| 48 | 3-669-524-00 | CLAW |
| 49 | 3-669-525-00 | LEVER (B) |
| 50 | 3-669-526-00 | TERMINAL |
| 51 | 3-669-528-00 | CAP, BUTTON |
| 52 | 3-669-574-00 | KNOB (B) |
| 53 | 3-669-592-00 | SPRING (A), TORSION |
| 54 | 3-669-593-00 | SPRING (B), TORSION |
| 55 | 3-669-594-00 | SPRING, COMPRESSION |
| 56 | 3-701-437-11 | WASHER |
| 57 | 3-701-822-00 | HOLDER, WIRE |
| 58 | 4-866-646-00 | INSULATOR (B) |
| 59 | 7-621-734-09 | SET-SCT, HEX. 2.6X3 |
| 60 | 7-621-775-10 | SCREW +B 2.6X4 |
| 61 | 7-682-147-09 | SCREW +P 3X6 |
| 62 | 7-682-245-04 | SCREW +K 3X4 |
| 63 | 7-685-546-19 | SCREW +BTP 3X8 TYPE2 N-S |
| 64 | 7-685-751-01 | SCREW +PTT 3X6 (S) |
| 65 | 7-685-752-09 | SCREW +PTT 3X8 (S) |
| 66 | 9-911-815-02 | CUSHION, CIRCUIT BREAKER |
| 67 | 9-911-838-XX | ESCUTCHEON, TOGGLE SWITCH |
| 68 | 9-911-845-XX | DAMPER (B), CAPSULE |
| 69 | 9-911-851-XX | CUSHION |
| 70 | 9-911-863-XX | INSULATOR, SHIELD PLATE, CONTROL |
| 71 | A-4322-415-A | PANEL ASSY, FRONT, SUB |
| 72 | A-4334-004-A | MOUNTED PCB, ANALOG |
| 73 | A-4335-237-A | MOUNTED PCB, DIGITAL |
| 74 | X-2362-302-0 | RING ASSY, HANDLE |
| 75 | X-2362-303-0 | KNOB ASSY, REC |
| 76 | X-2362-304-0 | KNOB ASSY, HEADPHONE |
| 77 | X-2362-305-0 | PLATE ASSY, SHIELD, CENTER |
| 78 | X-2362-307-1 | CASE, UPPER |
| 79 | A-4380-038-A | MOUNTED PCB, DRIVE, METER |
| 80 | A-4394-278-A | MOUNTED PCB, POWER |
| 81 | 2-362-371-00 | CLIP, IC |
| 82 | 2-362-374-00 | INSULATOR, VCO |
| 83 | 2-362-375-00 | CUSHION, REAR PANEL |

GENERAL SECTION

| No. | Part No. | Description |
|-----|--------------|-------------------------------|
| 84 | 2-362-381-11 | (US)....RING, SHORT |
| 85 | 2-362-382-00 | (US)....LUG, JUCK |
| 86 | 2-362-383-00 | (US)....LABEL, FCC APPROVAL |
| 87 | 2-362-384-00 | (US)....SCREW, +PTWH 3X10 |
| 88 | 3-701-690-00 | (UK)....LABEL (MADE IN JAPAN) |

ACCESSORY & PACKING MATERIAL

| No. | Part No. | Description |
|-----|----------------|-------------------------------------|
| 101 | A-1-463-428-00 | (AEP).....ADAPTOR, AC (AC-700) |
| 101 | A-1-463-429-00 | (US).....ADAPTOR, AC (AC-700) |
| 101 | A-1-463-430-00 | (UK).....ADAPTOR, AC (AC-700) |
| 101 | A-1-463-439-00 | (Canadian)....ADAPTOR, AC (AC-700) |
| 102 | 1-551-315-00 | CORD, CONNECTION |
| 103 | 1-556-254-00 | CORD, CONNECTION |
| 104 | 1-551-086-31 | (US,Canadian)...CORD, CONNECTION |
| 104 | 1-556-464-00 | (AEP,UK).....CORD, CONNECTION |
| 105 | 2-362-351-00 | CUSHION, LOWER |
| 106 | 2-362-352-00 | CUSHION, UPPER |
| 107 | 2-362-380-00 | INDIVIDUAL CARTON |
| 108 | 3-701-626-00 | BAG, POLYETHYLENE |
| 109 | 3-701-630-00 | BAG, POLYETHYLENE |
| 110 | 3-701-632-00 | BAG, POLYETHYLENE |
| 111 | 3-783-877-11 | (AEP,UK).....MANUAL, INSTRUCTION |
| 111 | 3-783-877-21 | (US,Canadian)...MANUAL, INSTRUCTION |
| 111 | 3-783-877-31 | (Canadian).....MANUAL, INSTRUCTION |
| 111 | 3-783-877-41 | (AEP).....MANUAL, INSTRUCTION |
| 112 | 4-825-727-00 | SHEET, PROTECTION |
| 113 | X-3669-375-0 | STRAP ASSY (A) |

ELECTRICAL PARTS

| Ref.No. | Part No. | Description |
|---------|----------------|---------------------------------------|
| 501 | A-1-464-196-00 | (AEP,UK).....CONVERTER UNIT, DC-DC |
| 501 | A-1-464-987-00 | (US,Canadian)...CONVERTER UNIT, DC-DC |
| 502 | 1-606-989-00 | PC BOARD, POWER INPUT |
| 503 | 1-606-986-00 | PC BOARD, POWER |
| 504 | 1-606-987-00 | PC BOARD, METER DRIVE |
| 505 | 1-606-988-00 | PC BOARD, RELAY |
| 506 | 1-606-990-00 | PC BOARD, 4P PIN JACK |
| 507 | 1-606-991-00 | PC BOARD, REC VR |
| 508 | 1-606-992-00 | PC BOARD, MIC JACK |
| 509 | 1-606-993-00 | PC BOARD, TOGGLE SWITCH |
| 510 | 1-606-994-00 | PC BOARD, HEADPHONE ATT |
| 511 | 1-606-995-00 | PC BOARD, HEADPHONE JACK |
| 512 | 1-606-996-00 | PC BOARD, POWER SWITCH |
| 513 | 1-606-997-00 | PC BOARD, REC MUTE SW |
| 514 | 1-606-998-00 | PC BOARD, KEY BOARD SWITCH |
| C102 | 1-107-294-00 | MICA 56PF 5% 100V |
| C104 | 1-107-284-00 | MICA 22PF 5% 100V |
| C105 | 1-123-830-00 | ELECT 4.7MF 20% 50V |
| C110 | 1-107-165-00 | MICA 56PF 5% 500V |
| C111 | 1-107-309-00 | MICA 100PF 5% 500V |
| C112 | 1-107-322-00 | MICA 22PF 5% 500V |
| C113 | 1-130-922-00 | FILM 0.0056MF 2% 250V |
| C114 | 1-131-450-91 | TANTALUM 1MF 20% 50V |
| C115 | 1-131-450-91 | TANTALUM 1MF 20% 50V |
| C116 | 1-131-450-91 | TANTALUM 1MF 20% 50V |
| C117 | 1-131-450-91 | TANTALUM 1MF 20% 50V |
| C118 | 1-131-450-91 | TANTALUM 1MF 20% 50V |
| C119 | 1-131-522-00 | TANTALUM 10MF 20% 25V |
| C120 | 1-131-522-00 | TANTALUM 10MF 20% 25V |
| C121 | 1-107-308-00 | MICA 220PF 5% 100V |
| C122 | 1-131-450-91 | TANTALUM 1MF 20% 50V |
| C123 | 1-131-450-91 | TANTALUM 1MF 20% 50V |
| C124 | 1-131-450-91 | TANTALUM 1MF 20% 50V |
| C125 | 1-104-230-00 | POLYSTYRENE 0.0015MF 5% 500V |
| C126 | 1-131-450-91 | TANTALUM 1MF 20% 50V |
| C127 | 1-131-450-91 | TANTALUM 1MF 20% 50V |
| C134 | 1-131-371-71 | TANTALUM 10MF 20% 16V |
| C135 | 1-131-371-71 | TANTALUM 10MF 20% 16V |
| C136 | 1-131-371-71 | TANTALUM 10MF 20% 16V |
| C137 | 1-131-450-91 | TANTALUM 1MF 20% 50V |
| C140 | 1-123-830-00 | ELECT 4.7MF 20% 50V |
| C143 | 1-104-230-00 | POLYSTYRENE 0.0015MF 5% 500V |
| C144 | 1-131-450-91 | TANTALUM 1MF 20% 50V |
| C145 | 1-131-450-91 | TANTALUM 1MF 20% 50V |
| C146 | 1-131-450-91 | TANTALUM 1MF 20% 50V |

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

- In each case, U : μ, for example:
UA.... : μA...., UPA.... : μPA...., UPC.... : μPC,
UPD.... : μPD....

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

COILS

- MMH : mH, UH : μH

The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.

SEMICONDUCTORS

- In each case, U : μ, for example:
UA.... : μA...., UPA.... : μPA...., UPC.... : μPC,
UPD.... : μPD....

ELECTRICAL PARTS

| Ref.No. | Part No. | Description | | | |
|---------|--------------|-------------|----------|-----|------|
| C147 | 1-107-317-00 | MICA | 33PF | 5% | 500V |
| C148 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C149 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C150 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C151 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C153 | 1-107-324-00 | MICA | 0.0039MF | 2% | 100V |
| C154 | 1-131-522-00 | TANTALUM | 10MF | 20% | 25V |
| C155 | 1-131-522-00 | TANTALUM | 10MF | 20% | 25V |
| C156 | 1-107-310-00 | MICA | 220PF | 5% | 500V |
| C157 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C158 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C159 | 1-130-621-00 | FILM | 0.012MF | 5% | 50V |
| C162 | 1-131-371-71 | TANTALUM | 10MF | 20% | 16V |
| C202 | 1-107-294-00 | MICA | 56PF | 5% | 100V |
| C204 | 1-107-284-00 | MICA | 22PF | 5% | 100V |
| C205 | 1-123-830-00 | ELECT | 4.7MF | 20% | 50V |
| C210 | 1-107-165-00 | MICA | 56PF | 5% | 500V |
| C211 | 1-107-309-00 | MICA | 100PF | 5% | 500V |
| C212 | 1-107-322-00 | MICA | 22PF | 5% | 500V |
| C213 | 1-130-922-00 | FILM | 0.0056MF | 2% | 250V |
| C214 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C215 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C216 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C217 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C218 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C219 | 1-131-522-00 | TANTALUM | 10MF | 20% | 25V |
| C220 | 1-131-522-00 | TANTALUM | 10MF | 20% | 25V |
| C221 | 1-107-308-00 | MICA | 220PF | 5% | 100V |
| C222 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C223 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C224 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C225 | 1-104-230-00 | POLYSTYRENE | 0.0015MF | 5% | 500V |
| C226 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C227 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C234 | 1-131-371-71 | TANTALUM | 10MF | 20% | 16V |
| C235 | 1-131-371-71 | TANTALUM | 10MF | 20% | 16V |
| C236 | 1-131-371-71 | TANTALUM | 10MF | 20% | 16V |
| C237 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C240 | 1-123-830-00 | ELECT | 4.7MF | 20% | 50V |
| C243 | 1-104-230-00 | POLYSTYRENE | 0.0015MF | 5% | 500V |
| C244 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C245 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C246 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C247 | 1-107-317-00 | MICA | 33PF | 5% | 500V |
| C248 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |

ELECTRICAL PARTS

| Ref.No. | Part No. | Description | | | |
|---------|--------------|-------------|----------|-----|------|
| C249 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C250 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C251 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C253 | 1-107-324-00 | MICA | 0.0039MF | 2% | 100V |
| C254 | 1-131-522-00 | TANTALUM | 10MF | 20% | 25V |
| C255 | 1-131-522-00 | TANTALUM | 10MF | 20% | 25V |
| C256 | 1-107-310-00 | MICA | 220PF | 5% | 500V |
| C257 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C258 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C259 | 1-130-621-00 | FILM | 0.012MF | 5% | 50V |
| C262 | 1-131-371-71 | TANTALUM | 10MF | 20% | 16V |
| C301 | 1-131-371-71 | TANTALUM | 10MF | 20% | 16V |
| C304 | 1-131-371-71 | TANTALUM | 10MF | 20% | 16V |
| C305 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C306 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C308 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C309 | 1-131-371-71 | TANTALUM | 10MF | 20% | 16V |
| C312 | 1-131-371-71 | TANTALUM | 10MF | 20% | 16V |
| C313 | 1-131-371-71 | TANTALUM | 10MF | 20% | 16V |
| C314 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C320 | 1-131-450-00 | TANTALUM | 1MF | 20% | 35V |
| C321 | 1-131-450-00 | TANTALUM | 1MF | 20% | 35V |
| C322 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C323 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C325 | 1-161-323-00 | CERAMIC | 0.001MF | 10% | 50V |
| C503 | 1-123-230-00 | ELECT | 2.2MF | 20% | 50V |
| C510 | 1-131-343-71 | TANTALUM | 0.22MF | 20% | 35V |
| C511 | 1-123-230-00 | ELECT | 2.2MF | 20% | 50V |
| C515 | 1-131-343-71 | TANTALUM | 0.22MF | 20% | 35V |
| C519 | 1-131-343-71 | TANTALUM | 0.22MF | 20% | 35V |
| C522 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C523 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C524 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C525 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C526 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C536 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C546 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C551 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C552 | 1-102-157-00 | CERAMIC | 560PF | 10% | 500V |
| C558 | 1-131-341-91 | TANTALUM | 0.1MF | 10% | 35V |
| C559 | 1-131-344-91 | TANTALUM | 0.33MF | 10% | 35V |
| C560 | 1-131-346-91 | TANTALUM | 0.68MF | 10% | 35V |
| C563 | 1-131-371-00 | TANTALUM | 10MF | 10% | 16V |
| C570 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C572 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |

ELECTRICAL PARTS

| Ref.No. | Part No. | Description | | | |
|---------|--------------|------------------|--------|-----|------|
| C584 | 1-131-347-00 | TANTALUM | 1MF | 20% | 35V |
| C585 | 1-131-347-00 | TANTALUM | 1MF | 20% | 35V |
| C590 | 1-102-716-00 | CERAMIC | 12PF | 5% | 50V |
| C601 | 1-130-637- | FILM | 0.27MF | 5% | 50V |
| C610 | 1-123-324-00 | ELECT | 1000MF | 20% | 16V |
| C614 | 1-123-325-00 | ELECT | 2200MF | 20% | 16V |
| C615 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C621 | 1-130-632-00 | FILM | 0.1MF | 5% | 50V |
| C628 | 1-131-342-91 | TANTALUM | 0.15MF | 10% | 35V |
| C629 | 1-131-342-91 | TANTALUM | 0.15MF | 10% | 35V |
| C631 | 1-131-368-71 | TANTALUM | 3.3MF | 20% | 16V |
| C633 | 1-131-368-71 | TANTALUM | 3.3MF | 20% | 16V |
| C634 | 1-123-685-00 | ELECT | 470MF | 20% | 16V |
| C635 | 1-123-685-00 | ELECT | 470MF | 20% | 16V |
| C636 | 1-123-685-00 | ELECT | 470MF | 20% | 16V |
| C637 | 1-123-685-00 | ELECT | 470MF | 20% | 16V |
| C638 | 1-107-309-00 | MICA | 100PF | 5% | 500V |
| C639 | 1-107-309-00 | MICA | 100PF | 5% | 500V |
| C640 | 1-131-520-00 | TANTALUM | 22MF | 20% | 16V |
| C641 | 1-131-520-00 | TANTALUM | 22MF | 20% | 16V |
| C642 | 1-123-685-00 | ELECT | 470MF | 20% | 16V |
| C643 | 1-123-685-00 | ELECT | 470MF | 20% | 16V |
| C644 | 1-123-685-00 | ELECT | 470MF | 20% | 16V |
| C645 | 1-123-685-00 | ELECT | 470MF | 20% | 16V |
| C646 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C647 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C648 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C649 | 1-131-450-91 | TANTALUM | 1MF | 20% | 50V |
| C651 | 1-123-687-11 | ELECT | 2200MF | 20% | 16V |
| C652 | 1-123-687-11 | ELECT | 2200MF | 20% | 16V |
| C703 | 1-131-377-00 | TANTALUM | 10MF | 20% | 10V |
| C704 | 1-123-298-00 | ELECT | 470MF | 20% | 6.3V |
| C705 | 1-131-347-00 | TANTALUM | 1MF | 20% | 35V |
| CNJ301 | 1-507-740-21 | JACK, PIN 4P | | | |
| CNJ302 | 1-507-775-00 | JACK, PIN 3P | | | |
| CT589 | 1-141-232-00 | CAP, TRIMAR 11PF | | | |
| D101 | 8-719-200-47 | DIODE 10YD4.5B | | | |
| D102 | 8-719-224-11 | DIODE 10YD2.4A | | | |
| D103 | 8-719-300-02 | DIODE SV-02 | | | |
| D104 | 8-719-200-04 | DIODE 10YD1.3B | | | |
| D105 | 8-719-910-65 | DIODE HZ6B2L | | | |
| D106 | 8-719-911-19 | DIODE 1SS119 | | | |
| D107 | 8-719-910-65 | DIODE HZ6B2L | | | |
| D108 | 8-719-200-04 | DIODE 10YD1.3B | | | |
| D109 | 8-719-911-50 | DIODE HZ5C1 | | | |

ELECTRICAL PARTS

| Ref.No. | Part No. | Description | | | |
|---------|--------------|----------------|--|--|--|
| D110 | 8-719-911-50 | DIODE HZ5C1 | | | |
| D201 | 8-719-200-47 | DIODE 10YD4.5B | | | |
| D202 | 8-719-224-11 | DIODE 10YD2.4A | | | |
| D203 | 8-719-300-02 | DIODE SV-02 | | | |
| D204 | 8-719-200-04 | DIODE 10YD1.3B | | | |
| D205 | 8-719-910-65 | DIODE HZ6B2L | | | |
| D206 | 8-719-911-19 | DIODE 1SS119 | | | |
| D207 | 8-719-910-65 | DIODE HZ6B2L | | | |
| D208 | 8-719-200-04 | DIODE 10YD1.3B | | | |
| D209 | 8-719-911-50 | DIODE HZ5C1 | | | |
| D210 | 8-719-911-50 | DIODE HZ5C1 | | | |
| D301 | 8-719-911-19 | DIODE 1SS119T1 | | | |
| D302 | 8-719-911-19 | DIODE 1SS119T1 | | | |
| D303 | 8-719-911-19 | DIODE 1SS119T1 | | | |
| D304 | 8-719-911-19 | DIODE 1SS119T1 | | | |
| D305 | 8-719-911-19 | DIODE 1SS119T1 | | | |
| D310 | 8-719-910-65 | DIODE HZ6B2L | | | |
| D501 | 8-719-911-19 | DIODE 1SS119 | | | |
| D502 | 8-719-911-19 | DIODE 1SS119 | | | |
| D503 | 8-719-911-19 | DIODE 1SS119 | | | |
| D504 | 8-719-911-19 | DIODE 1SS119 | | | |
| D505 | 8-719-911-19 | DIODE 1SS119 | | | |
| D506 | 8-719-911-19 | DIODE 1SS119 | | | |
| D507 | 8-719-910-75 | DIODE HZ7B2L | | | |
| D508 | 8-719-911-19 | DIODE 1SS119 | | | |
| D509 | 8-719-911-19 | DIODE 1SS119 | | | |
| D510 | 8-719-911-19 | DIODE 1SS119 | | | |
| D511 | 8-719-915-43 | DIODE FC54M | | | |
| D512 | 8-719-911-19 | DIODE 1SS119 | | | |
| D513 | 8-719-911-19 | DIODE 1SS119 | | | |
| D514 | 8-719-911-19 | DIODE 1SS119 | | | |
| D515 | 8-719-910-96 | DIODE HZ9B3L | | | |
| D601 | 8-719-911-50 | DIODE HZ5C1 | | | |
| D602 | 8-719-910-82 | DIODE HZ18-2L | | | |
| D603 | 8-719-911-19 | DIODE 1SS119 | | | |
| D604 | 8-719-200-02 | DIODE 10E-2 | | | |
| D605 | 8-719-910-96 | DIODE HZ9B3L | | | |
| D606 | 8-719-910-61 | DIODE HZ6A1L | | | |
| D607 | 8-719-911-19 | DIODE 1SS119 | | | |
| D608 | 8-719-910-64 | DIODE HZ6B1L | | | |
| D609 | 8-719-911-19 | DIODE 1SS119 | | | |
| D610 | 8-719-815-55 | DIODE 1S1555 | | | |
| D611 | 8-719-815-55 | DIODE 1S1555 | | | |
| D612 | 8-719-815-55 | DIODE 1S1555 | | | |
| D613 | 8-719-815-55 | DIODE 1S1555 | | | |

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "•" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF: μF, PF: μF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F: nonflammable

COILS

- MMH: mH, UH: μH

SEMICONDUCTORS

- In each case, U: μ, for example: UA...: μA..., UPA...: μPA..., UPC...: μPC, UPD...: μPD...

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "•" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF: μF, PF: μF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F: nonflammable

COILS

- MMH: mH, UH: μH

SEMICONDUCTORS

- In each case, U: μ, for example: UA...: μA..., UPA...: μPA..., UPC...: μPC, UPD...: μPD...

| ELECTRICAL PARTS | | |
|------------------|--------------|-------------------|
| Ref.No. | Part No. | Description |
| D614 | 8-719-815-55 | DIODE 1S1555 |
| D615 | 8-719-815-55 | DIODE 1S1555 |
| D616 | 8-719-911-19 | DIODE 1SS119 |
| D617 | 8-719-911-19 | DIODE 1SS119 |
| D618 | 8-719-902-97 | DIODE EQA01-06R2 |
| D619 | 8-719-902-97 | DIODE EQA01-06R2 |
| D621 | 8-719-910-64 | DIODE HZ6B1L |
| D623 | 8-719-911-19 | DIODE 1SS119 |
| D624 | 8-719-200-06 | DIODE 10YD0.6 |
| D625 | 8-719-200-06 | DIODE 10YD0.6 |
| D626 | 8-719-911-19 | DIODE 1SS119 |
| D627 | 8-719-911-19 | DIODE 1SS119 |
| D628 | 8-719-911-19 | DIODE 1SS119 |
| D629 | 8-719-911-19 | DIODE 1SS119 |
| D630 | 8-719-934-34 | DIODE AA3432S |
| D631 | 8-719-911-19 | DIODE 1SS119 |
| D634 | 8-719-224-11 | DIODE 10YD2.4A |
| D635 | 8-719-224-11 | DIODE 10YD2.4A |
| D640 | 8-719-200-02 | DIODE 10E-2 |
| D641 | 8-719-200-02 | DIODE 10E-2 |
| D642 | 8-719-911-19 | DIODE 1SS119 |
| D643 | 8-719-911-19 | DIODE 1SS119 |
| D644 | 8-719-911-19 | DIODE 1SS119 |
| D645 | 8-719-911-19 | DIODE 1SS119 |
| D646 | 8-719-911-19 | DIODE 1SS119 |
| D647 | 8-719-911-19 | DIODE 1SS119 |
| D648 | 8-719-911-19 | DIODE 1SS119 |
| D649 | 8-719-981-00 | DIODE ERC81-004 |
| D650 | 8-719-911-19 | DIODE 1SS119 |
| D651 | 8-719-911-19 | DIODE 1SS119 |
| D652 | 8-719-910-64 | DIODE HZ6B1L |
| D653 | 8-719-911-19 | DIODE 1SS119 |
| D654 | 8-719-911-19 | DIODE 1SS119 |
| D655 | 8-719-911-19 | DIODE 1SS119 |
| D701 | 8-719-901-33 | DIODE 1SS133 |
| D702 | 8-719-901-33 | DIODE 1SS133 |
| D703 | 8-719-901-33 | DIODE 1SS133 |
| D704 | 8-719-910-61 | DIODE HZ6A1L |
| D705 | 8-719-901-33 | DIODE 1SS133 |
| D706 | 8-719-901-33 | DIODE 1SS133 |
| D707 | 1-806-336-00 | DIODE SB102 (LED) |
| IC101 | 8-759-905-42 | IC NE5534P |
| IC102 | 8-759-993-53 | IC LF353H |
| IC103 | 8-759-993-53 | IC LF353H |

| ELECTRICAL PARTS | | |
|------------------|--------------|---------------|
| Ref.No. | Part No. | Description |
| IC104 | 8-758-990-00 | IC CX-899 |
| IC105 | 8-759-993-53 | IC LF353H |
| IC106 | 8-759-340-53 | IC MSM4053RS |
| IC107 | 8-759-907-01 | IC TL071CP |
| IC108 | 8-759-903-56 | IC LF356H |
| IC109 | 8-759-145-58 | IC UPC4558C |
| IC201 | 8-759-905-42 | IC NE5534P |
| IC202 | 8-759-993-53 | IC LF353H |
| IC203 | 8-759-993-53 | IC LF353H |
| IC204 | 8-758-990-00 | IC CX-899 |
| IC205 | 8-759-993-53 | IC LF353H |
| IC206 | 8-759-940-53 | IC MSM4053RS |
| IC207 | 8-759-907-01 | IC TL071CP |
| IC208 | 8-759-903-56 | IC LF356H |
| IC209 | 8-759-145-58 | IC UPC4558C |
| IC301 | 8-759-200-05 | IC TC40H008P |
| IC302 | 8-759-220-74 | IC TC40H074P |
| IC303 | 8-759-979-05 | IC UA79M05CKC |
| IC304 | 8-758-900-00 | IC CX-890 |
| IC306 | 8-759-745-56 | IC NJM4556D |
| IC501 | 8-759-903-55 | IC LF357H |
| IC502 | 8-759-903-55 | IC LF357H |
| IC503 | 8-759-993-53 | IC LF353H |
| IC504 | 8-759-103-19 | IC UPC319C |
| IC505 | 8-759-979-14 | IC CX-7914 |
| IC506 | 8-759-245-05 | IC TM4505P |
| IC507 | 8-759-901-28 | IC MSM512812R |
| IC508 | 8-759-178-50 | IC UPD785C |
| IC509 | 8-759-901-28 | IC MSM512812R |
| IC510 | 8-759-900-69 | IC SN74ALS74N |
| IC511 | 8-759-240-24 | IC TC4024BP |
| IC512 | 8-759-900-67 | IC SN74ALS02N |
| IC513 | 8-759-900-67 | IC SN74ALS02N |
| IC514 | 8-759-220-32 | IC TC40H032P |
| IC515 | 8-759-245-28 | IC TC4528BP |
| IC516 | 8-759-900-69 | IC SN74ALS74N |
| IC517 | 8-759-221-64 | IC TC40H164P |
| IC518 | 8-759-221-64 | IC TC40H164P |
| IC519 | 8-759-220-74 | IC TC40H074P |
| IC520 | 8-759-220-74 | IC TC40H074P |
| IC521 | 8-759-220-74 | IC TC40H074P |
| IC522 | 8-759-901-63 | IC SN74LS163A |
| IC523 | 8-759-901-64 | IC SN74LS164N |
| IC524 | 8-759-200-09 | IC TC40H393P |
| IC525 | 8-759-241-63 | IC TC40163BP |

| ELECTRICAL PARTS | | |
|------------------|--------------|----------------------|
| Ref.No. | Part No. | Description |
| IC526 | 8-759-901-63 | IC SN74LS163A |
| IC527 | 8-759-220-74 | IC TC40H074P |
| IC528 | 8-759-240-29 | IC TC4029BP |
| IC529 | 8-759-901-57 | IC SN74LS157N |
| IC530 | 8-759-245-28 | IC TC4528BP |
| IC531 | 8-759-990-72 | IC TL072CP |
| IC532 | 8-759-200-05 | IC TC40H008P |
| IC533 | 8-759-904-14 | IC SN74ALS04N |
| IC534 | 8-759-200-08 | IC TC40H367P |
| IC535 | 8-759-900-04 | IC SN74LS04N |
| IC536 | 8-759-178-15 | IC UPC78L15 |
| IC537 | 8-759-220-02 | IC TC40H002P |
| IC538 | 8-759-200-05 | IC TC40H008P |
| IC539 | 8-759-200-05 | IC TC40H008P |
| IC540 | 8-759-900-27 | IC SN74LS27N |
| IC541 | 8-759-974-06 | IC SN7406N |
| IC550 | 8-759-905-69 | IC NE564N |
| IC551 | 8-759-904-98 | IC 74LS169PC |
| IC552 | 8-759-904-98 | IC 74LS169PC |
| IC553 | 8-759-904-98 | IC 74LS169PC |
| IC554 | 8-759-904-98 | IC 74LS169PC |
| IC555 | 8-759-900-69 | IC SN74ALS74N |
| IC601 | 8-759-240-93 | IC TC4093BP |
| IC602 | 8-759-145-84 | IC UPD4584BC |
| IC603 | 8-759-240-50 | IC TC4050BP |
| IC605 | 8-759-240-01 | IC TC4001BP |
| IC606 | 8-759-240-01 | IC TC4001BP |
| IC607 | 8-759-240-11 | IC TC4011BP |
| IC609 | 8-759-145-57 | IC UPC4557C |
| IC610 | 8-759-240-66 | IC TC4066BP |
| IC701 | 8-759-120-30 | IC UPD652C030 |
| IC702 | 8-759-940-50 | IC MSM4050RS |
| IC703 | 8-759-729-03 | IC NJM2903D |
| J101 | 1-507-666-00 | JACK, LARGE TYPE |
| J201 | 1-507-666-00 | JACK, LARGE TYPE |
| J301 | 1-507-649-00 | JACK |
| J601 | 1-561-794-00 | SOCKET, CONNECTOR 5P |
| L501 | 1-407-169-XX | MICRO INDUCTOR 100UH |
| L502 | 1-407-169-XX | MICRO INDUCTOR 100UH |
| L503 | 1-426-090-00 | TRANSFORMER, RF |
| L504 | 1-407-163-XX | MICRO INDUCTOR 33UH |
| L505 | 1-459-379-00 | COIL (WITH CORE) |
| L506 | 1-407-163-XX | MICRO INDUCTOR 33UH |
| LPF101 | 1-464-170-00 | FILTER, LOW PASS |
| LPF102 | 1-464-170-00 | FILTER, LOW PASS |
| LPF201 | 1-464-170-00 | FILTER, LOW PASS |
| LPF202 | 1-464-170-00 | FILTER, LOW PASS |

| ELECTRICAL PARTS | | |
|------------------|--------------|----------------------|
| Ref.No. | Part No. | Description |
| Q101 | 8-765-660-10 | TRANSISTOR 2SK245 |
| Q102 | 8-765-640-10 | TRANSISTOR 2SK244 |
| Q103 | 8-729-113-82 | TRANSISTOR 2SA1138 |
| Q104 | 8-729-113-82 | TRANSISTOR 2SA1138 |
| Q105 | 8-729-167-62 | TRANSISTOR 2SC2676 |
| Q106 | 8-729-167-62 | TRANSISTOR 2SC2676 |
| Q107 | 8-729-907-11 | TRANSISTOR 2SC2071 |
| Q108 | 8-729-993-92 | TRANSISTOR 2SA939 |
| Q109 | 8-765-422-00 | TRANSISTOR 2SK152-2 |
| Q110 | 8-765-422-00 | TRANSISTOR 2SK152-2 |
| Q111 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |
| Q201 | 8-765-660-10 | TRANSISTOR 2SK245 |
| Q202 | 8-765-640-10 | TRANSISTOR 2SK244 |
| Q203 | 8-729-113-82 | TRANSISTOR 2SA1138 |
| Q204 | 8-729-113-82 | TRANSISTOR 2SA1138 |
| Q205 | 8-729-167-62 | TRANSISTOR 2SC2676 |
| Q206 | 8-729-167-62 | TRANSISTOR 2SC2676 |
| Q207 | 8-729-907-11 | TRANSISTOR 2SC2071 |
| Q208 | 8-729-993-92 | TRANSISTOR 2SA939 |
| Q209 | 8-765-422-00 | TRANSISTOR 2SK152-2 |
| Q210 | 8-765-422-00 | TRANSISTOR 2SK152-2 |
| Q211 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |
| Q501 | 8-769-132-00 | TRANSISTOR 2SK121-2 |
| Q502 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q503 | 8-769-132-00 | TRANSISTOR 2SK121-2 |
| Q504 | 8-729-612-77 | TRANSISTOR 2SA1027R |
| Q505 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q506 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q507 | 8-729-612-77 | TRANSISTOR 2SA1027R |
| Q508 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q509 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q510 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q511 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q513 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q514 | 8-729-612-77 | TRANSISTOR 2SA1027R |
| Q515 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q516 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q517 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q518 | 8-729-671-14 | TRANSISTOR 2SC710-14 |
| Q519 | 8-729-671-14 | TRANSISTOR 2SC710-14 |
| Q520 | 8-729-671-14 | TRANSISTOR 2SC710-14 |
| Q521 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q522 | 8-729-224-62 | TRANSISTOR 2SK246-GR |
| Q523 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q524 | 8-725-923-00 | TRANSISTOR 2SC1129 |

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CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

F : nonflammable

COILS

MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA.... : μA...., UPA.... : μPA...., UPC.... : μPC,
UPD.... : μPD....

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "●" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
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CAPACITORS:

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MF:μF, PF:μμF.

RESISTORS

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F : nonflammable

COILS

MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA.... : μA...., UPA.... : μPA...., UPC.... : μPC,
UPD.... : μPD....

ELECTRICAL PARTS

| Ref.No. | Part No. | Description |
|---------|--------------|----------------------|
| Q525 | 8-769-200-30 | TRANSISTOR 2SK107-3 |
| Q526 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q527 | 8-729-671-14 | TRANSISTOR 2SC710-14 |
| Q528 | 8-729-671-14 | TRANSISTOR 2SC710-14 |
| Q529 | 8-729-671-14 | TRANSISTOR 2SC710-14 |
| Q601 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |
| Q602 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |
| Q603 | 8-729-177-43 | TRANSISTOR 2SD774 |
| Q604 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |
| Q605 | 8-729-177-43 | TRANSISTOR 2SD774 |
| Q606 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |
| Q607 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |
| Q608 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |
| Q609 | 8-729-612-77 | TRANSISTOR 2SA1027R |
| Q610 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |
| Q611 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |
| Q612 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |
| Q613 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |
| Q615 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |
| Q616 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |
| Q617 | 8-729-612-77 | TRANSISTOR 2SA1027R |
| Q619 | 8-729-612-77 | TRANSISTOR 2SA1027R |
| Q621 | 8-729-612-77 | TRANSISTOR 2SA1027R |
| Q622 | 8-729-612-77 | TRANSISTOR 2SA1027R |
| Q623 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |
| Q624 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |
| Q625 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |
| Q626 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |
| Q627 | 8-729-612-77 | TRANSISTOR 2SA1027R |
| Q628 | 8-729-167-62 | TRANSISTOR 2SC2676 |
| Q629 | 8-729-113-82 | TRANSISTOR 2SA1138 |
| Q630 | 8-729-107-53 | TRANSISTOR 2SC2275A |
| Q631 | 8-729-190-53 | TRANSISTOR 2SA985A |
| Q632 | 8-729-167-62 | TRANSISTOR 2SC2676 |
| Q633 | 8-729-113-82 | TRANSISTOR 2SA1138 |
| Q634 | 8-729-167-62 | TRANSISTOR 2SC2676 |
| Q635 | 8-729-113-82 | TRANSISTOR 2SA1138 |
| Q636 | 8-729-113-82 | TRANSISTOR 2SA1138 |
| Q637 | 8-729-167-62 | TRANSISTOR 2SC2676 |
| Q638 | 8-729-113-82 | TRANSISTOR 2SA1138 |
| Q639 | 8-729-167-62 | TRANSISTOR 2SC2676 |
| Q640 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |
| Q641 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |
| Q642 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |
| Q643 | 8-729-663-48 | TRANSISTOR 2SC1364-8 |

ELECTRICAL PARTS

| Ref.No. | Part No. | Description |
|---------|--------------|----------------------|
| Q701 | 8-729-902-11 | TRANSISTOR 2SC2021 |
| Q702 | 8-729-902-11 | TRANSISTOR 2SC2021 |
| Q703 | 8-729-902-11 | TRANSISTOR 2SC2021 |
| Q704 | 8-729-902-11 | TRANSISTOR 2SC2021 |
| Q705 | 8-729-902-11 | TRANSISTOR 2SC2021 |
| Q706 | 8-729-902-11 | TRANSISTOR 2SC2021 |
| Q707 | 8-729-902-11 | TRANSISTOR 2SC2021 |
| Q708 | 8-729-902-11 | TRANSISTOR 2SC2021 |
| Q709 | 8-729-902-11 | TRANSISTOR 2SC2021 |
| Q710 | 8-729-902-11 | TRANSISTOR 2SC2021 |
| Q711 | 8-729-902-11 | TRANSISTOR 2SC2021 |
| Q712 | 8-729-902-11 | TRANSISTOR 2SC2021 |
| Q713 | 8-729-902-11 | TRANSISTOR 2SC2021 |
| Q714 | 8-729-902-11 | TRANSISTOR 2SC2021 |
| Q715 | 8-729-902-11 | TRANSISTOR 2SC2021 |
| Q716 | 8-729-902-11 | TRANSISTOR 2SC2021-S |
| R102 | 1-214-092-00 | METAL 22 1% 1/4W |
| R103 | 1-214-156-00 | METAL 10K 1% 1/4W |
| R104 | 1-214-143-00 | METAL 3K 1% 1/4W |
| R105 | 1-214-143-00 | METAL 3K 1% 1/4W |
| R106 | 1-214-124-00 | METAL 470 1% 1/4W |
| R107 | 1-214-096-00 | METAL 33 1% 1/4W |
| R108 | 1-214-096-00 | METAL 33 1% 1/4W |
| R109 | 1-214-140-00 | METAL 2.2K 1% 1/4W |
| R110 | 1-214-100-00 | METAL 47 1% 1/4W |
| R111 | 1-214-180-00 | METAL 100K 1% 1/4W |
| R112 | 1-214-900-31 | METAL 30K 1% 1/2W |
| R113 | 1-214-921-31 | METAL 220K 1% 1/2W |
| R114 | 1-214-876-00 | METAL 3.3K 1% 1/2W |
| R115 | 1-214-100-00 | METAL 47 1% 1/4W |
| R116 | 1-214-785-00 | METAL 220K 1% 1/4W |
| R117 | 1-214-142-00 | METAL 2.7K 1% 1/4W |
| R118 | 1-214-142-00 | METAL 2.7K 1% 1/4W |
| R119 | 1-214-132-00 | METAL 1K 1% 1/4W |
| R121 | 1-214-885-61 | METAL 7.5K 1% 1/2W |
| R122 | 1-214-860-61 | METAL 680 1% 1/2W |
| R123 | 1-214-850-61 | METAL 270 1% 1/2W |
| R124 | 1-214-132-00 | METAL 1K 1% 1/4W |
| R125 | 1-214-123-00 | METAL 430 1% 1/4W |
| R126 | 1-214-139-00 | METAL 2K 1% 1/4W |
| R127 | 1-214-139-00 | METAL 2K 1% 1/4W |
| R128 | 1-214-116-00 | METAL 220 1% 1/4W |
| R129 | 1-214-092-00 | METAL 22 1% 1/4W |
| R130 | 1-214-092-00 | METAL 22 1% 1/4W |
| R131 | 1-214-888-00 | METAL 10K 1% 1/2W |
| R132 | 1-214-876-00 | METAL 3.3K 1% 1/2W |

ELECTRICAL PARTS

| Ref.No. | Part No. | Description |
|---------|--------------|--------------------|
| R133 | 1-214-888-00 | METAL 10K 1% 1/2W |
| R134 | 1-214-160-00 | METAL 15K 1% 1/4W |
| R135 | 1-214-888-00 | METAL 10K 1% 1/2W |
| R136 | 1-214-897-31 | METAL 22K 1% 1/2W |
| R137 | 1-214-868-00 | METAL 1.5K 1% 1/2W |
| R138 | 1-214-142-00 | METAL 2.7K 1% 1/4W |
| R139 | 1-214-132-00 | METAL 1K 1% 1/4W |
| R140 | 1-214-132-00 | METAL 1K 1% 1/4W |
| R142 | 1-214-132-00 | METAL 1K 1% 1/4W |
| R143 | 1-214-172-00 | METAL 47K 1% 1/4W |
| R144 | 1-214-156-00 | METAL 10K 1% 1/4W |
| R145 | 1-214-108-00 | METAL 100 1% 1/4W |
| R146 | 1-214-180-00 | METAL 100K 1% 1/4W |
| R147 | 1-214-146-00 | METAL 3.9K 1% 1/4W |
| R148 | 1-214-172-00 | METAL 47K 1% 1/4W |
| R149 | 1-214-180-00 | METAL 100K 1% 1/4W |
| R153 | 1-214-893-00 | METAL 16K 1% 1/2W |
| R154 | 1-214-164-00 | METAL 22K 1% 1/4W |
| R155 | 1-214-142-00 | METAL 2.7K 1% 1/4W |
| R156 | 1-214-164-00 | METAL 22K 1% 1/4W |
| R157 | 1-214-892-00 | METAL 15K 1% 1/2W |
| R159 | 1-214-880-61 | METAL 4.7K 1% 1/2W |
| R160 | 1-214-890-61 | METAL 12K 1% 1/2W |
| R161 | 1-214-862-00 | METAL 820 1% 1/2W |
| R162 | 1-214-956-00 | METAL 470K 1% 1/4W |
| R163 | 1-214-180-00 | METAL 100K 1% 1/4W |
| R164 | 1-214-852-61 | METAL 330 1% 1/2W |
| R165 | 1-214-180-00 | METAL 100K 1% 1/4W |
| R166 | 1-214-848-00 | METAL 220 1% 1/2W |
| R167 | 1-214-168-00 | METAL 33K 1% 1/4W |
| R168 | 1-214-158-00 | METAL 12K 1% 1/4W |
| R169 | 1-214-151-00 | METAL 6.2K 1% 1/4W |
| R170 | 1-214-143-00 | METAL 3K 1% 1/4W |
| R171 | 1-214-136-00 | METAL 1.5K 1% 1/4W |
| R172 | 1-214-136-00 | METAL 1.5K 1% 1/4W |
| R173 | 1-214-180-00 | METAL 100K 1% 1/4W |
| R174 | 1-214-173-00 | METAL 51K 1% 1/4W |
| R175 | 1-214-150-00 | METAL 5.6K 1% 1/4W |
| R176 | 1-214-112-00 | METAL 150 1% 1/4W |
| R177 | 1-214-172-00 | METAL 47K 1% 1/4W |
| R178 | 1-214-168-00 | METAL 33K 1% 1/4W |
| R184 | 1-214-126-00 | METAL 560 1% 1/4W |
| R185 | 1-214-126-00 | METAL 560 1% 1/4W |
| R186 | 1-214-150-00 | METAL 5.6K 1% 1/4W |
| R202 | 1-214-092-00 | METAL 22 1% 1/4W |

ELECTRICAL PARTS

| Ref.No. | Part No. | Description |
|---------|--------------|--------------------|
| R203 | 1-214-156-00 | METAL 10K 1% 1/4W |
| R204 | 1-214-143-00 | METAL 3K 1% 1/4W |
| R205 | 1-214-143-00 | METAL 3K 1% 1/4W |
| R206 | 1-214-124-00 | METAL 470 1% 1/4W |
| R207 | 1-214-096-00 | METAL 33 1% 1/4W |
| R208 | 1-214-096-00 | METAL 33 1% 1/4W |
| R209 | 1-214-140-00 | METAL 2.2K 1% 1/4W |
| R210 | 1-214-100-00 | METAL 47 1% 1/4W |
| R211 | 1-214-180-00 | METAL 100K 1% 1/4W |
| R212 | 1-214-900-31 | METAL 30K 1% 1/2W |
| R213 | 1-214-921-31 | METAL 220K 1% 1/2W |
| R214 | 1-214-876-00 | METAL 3.3K 1% 1/2W |
| R215 | 1-214-100-00 | METAL 47 1% 1/4W |
| R216 | 1-214-785-00 | METAL 220K 1% 1/4W |
| R217 | 1-214-142-00 | METAL 2.7K 1% 1/4W |
| R218 | 1-214-142-00 | METAL 2.7K 1% 1/4W |
| R219 | 1-214-132-00 | METAL 1K 1% 1/4W |
| R221 | 1-214-885-61 | METAL 7.5K 1% 1/2W |
| R222 | 1-214-860-61 | METAL 680 1% 1/2W |
| R223 | 1-214-850-61 | METAL 270 1% 1/2W |
| R224 | 1-214-132-00 | METAL 1K 1% 1/4W |
| R225 | 1-214-123-00 | METAL 430 1% 1/4W |
| R226 | 1-214-139-00 | METAL 2K 1% 1/4W |
| R227 | 1-214-139-00 | METAL 2K 1% 1/4W |
| R228 | 1-214-116-00 | METAL 220 1% 1/4W |
| R229 | 1-214-092-00 | METAL 22 1% 1/4W |
| R230 | 1-214-092-00 | METAL 22 1% 1/4W |
| R231 | 1-214-888-00 | METAL 10K 1% 1/2W |
| R232 | 1-214-876-00 | METAL 3.3K 1% 1/2W |
| R233 | 1-214-888-00 | METAL 10K 1% 1/2W |
| R234 | 1-214-160-00 | METAL 15K 1% 1/4W |
| R235 | 1-214-888-00 | METAL 10K 1% 1/2W |
| R236 | 1-214-897-31 | METAL 22K 1% 1/2W |
| R237 | 1-214-868-00 | METAL 1.5K 1% 1/2W |
| R238 | 1-214-142-00 | METAL 2.7K 1% 1/4W |
| R239 | 1-214-132-00 | METAL 1K 1% 1/4W |
| R240 | 1-214-132-00 | METAL 1K 1% 1/4W |
| R242 | 1-214-132-00 | METAL 1K 1% 1/4W |
| R243 | 1-214-172-00 | METAL 47K 1% 1/4W |
| R244 | 1-214-156-00 | METAL 10K 1% 1/4W |
| R245 | 1-214-108-00 | METAL 100 1% 1/4W |
| R246 | 1-214-180-00 | METAL 100K 1% 1/4W |

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (▲-△△△-△△△-XX or ▲-△△△△-△△△-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF . Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF: μF , PF: μF .

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

- In each case, U : μ , for example:
UA....: μA ..., UPA....: μPA ..., UPC....: μPC ,
UPD....: μPD ...

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- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (▲-△△△-△△△-XX or ▲-△△△△-△△△-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF . Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF: μF , PF: μF .

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

- In each case, U : μ , for example:
UA....: μA ..., UPA....: μPA ..., UPC....: μPC ,
UPD....: μPD ...

ELECTRICAL PARTS

| Ref.No. | Part No. | Description | | | |
|---------|----------------|------------------------|------|----|--------|
| R247 | 1-214-146-00 | METAL | 3.9K | 1% | 1/4W |
| R248 | 1-214-172-00 | METAL | 47K | 1% | 1/4W |
| R249 | 1-214-180-00 | METAL | 100K | 1% | 1/4W |
| R253 | 1-214-893-00 | METAL | 16K | 1% | 1/2W |
| R254 | 1-214-164-00 | METAL | 22K | 1% | 1/4W |
| R255 | 1-214-142-00 | METAL | 2.7K | 1% | 1/4W |
| R256 | 1-214-164-00 | METAL | 22K | 1% | 1/4W |
| R257 | 1-214-892-00 | METAL | 15K | 1% | 1/2W |
| R259 | 1-214-880-61 | METAL | 4.7K | 1% | 1/2W |
| R260 | 1-214-890-61 | METAL | 12K | 1% | 1/2W |
| R261 | 1-214-862-00 | METAL | 820 | 1% | 1/2W |
| R262 | 1-214-956-00 | METAL | 470K | 1% | 1/4W |
| R263 | 1-214-180-00 | METAL | 100K | 1% | 1/4W |
| R264 | 1-214-852-61 | METAL | 330 | 1% | 1/2W |
| R265 | 1-214-180-00 | METAL | 100K | 1% | 1/4W |
| R266 | 1-214-848-00 | METAL | 220 | 1% | 1/2W |
| R267 | 1-214-168-00 | METAL | 33K | 1% | 1/4W |
| R268 | 1-214-158-00 | METAL | 12K | 1% | 1/4W |
| R269 | 1-214-151-00 | METAL | 6.2K | 1% | 1/4W |
| R270 | 1-214-143-00 | METAL | 3K | 1% | 1/4W |
| R271 | 1-214-136-00 | METAL | 1.5K | 1% | 1/4W |
| R272 | 1-214-136-00 | METAL | 1.5K | 1% | 1/4W |
| R273 | 1-214-180-00 | METAL | 100K | 1% | 1/4W |
| R274 | 1-214-173-00 | METAL | 51K | 1% | 1/4W |
| R275 | 1-214-150-00 | METAL | 5.6K | 1% | 1/4W |
| R276 | 1-214-112-00 | METAL | 150 | 1% | 1/4W |
| R277 | 1-214-172-00 | METAL | 47K | 1% | 1/4W |
| R278 | 1-214-168-00 | METAL | 33K | 1% | 1/4W |
| R284 | 1-214-126-00 | METAL | 560 | 1% | 1/4W |
| R285 | 1-214-126-00 | METAL | 560 | 1% | 1/4W |
| R286 | 1-214-150-00 | METAL | 5.6K | 1% | 1/4W |
| R312 | 1-214-084-00 | METAL | 10 | 1% | 1/4W |
| R313 | 1-214-108-00 | METAL | 100 | 1% | 1/4W |
| R314 | 1-214-139-00 | METAL | 2K | 1% | 1/4W |
| R315 | 1-214-172-00 | METAL | 47K | 1% | 1/4W |
| R316 | A 1-212-857-00 | (Canadian)...RES. FUSE | 10 | 5% | 1/4W F |
| R316 | 1-214-084-00 | (US,AEP,UK)...METAL | 10 | 1% | 1/4W |
| R317 | A 1-212-857-00 | (Canadian)...RES. FUSE | 10 | 5% | 1/4W F |
| R317 | 1-214-084-00 | (US,AEP,UK)...METAL | 10 | 1% | 1/4W |
| R320 | 1-214-146-00 | METAL | 3.9K | 1% | 1/4W |
| R321 | 1-214-150-00 | METAL | 5.6K | 1% | 1/4W |
| R589 | 1-214-128-00 | METAL | 680 | 1% | 1/4W |

ELECTRICAL PARTS

| Ref.No. | Part No. | Description | | | |
|---------|--------------|---------------------------|------|----|------|
| R663 | 1-214-132-00 | METAL | 1K | 1% | 1/4W |
| R664 | 1-214-132-00 | METAL | 1K | 1% | 1/4W |
| R686 | 1-214-136-00 | METAL | 1.5K | 1% | 1/4W |
| R687 | 1-214-136-00 | METAL | 1.5K | 1% | 1/4W |
| R688 | 1-214-132-00 | METAL | 1K | 1% | 1/4W |
| R689 | 1-214-132-00 | METAL | 1K | 1% | 1/4W |
| R692 | 1-214-158-00 | METAL | 12K | 1% | 1/4W |
| R693 | 1-214-158-00 | METAL | 12K | 1% | 1/4W |
| R694 | 1-214-888-00 | METAL | 10K | 1% | 1/2W |
| R695 | 1-214-888-00 | METAL | 10K | 1% | 1/2W |
| R696 | 1-214-158-00 | METAL | 12K | 1% | 1/4W |
| R697 | 1-214-158-00 | METAL | 12K | 1% | 1/4W |
| R698 | 1-214-874-00 | METAL | 2.7K | 1% | 1/2W |
| R699 | 1-214-874-00 | METAL | 2.7K | 1% | 1/2W |
| R732 | 1-214-760-00 | METAL | 20K | 1% | 1/4W |
| R733 | 1-214-760-00 | METAL | 20K | 1% | 1/4W |
| R734 | 1-214-760-00 | METAL | 20K | 1% | 1/4W |
| R735 | 1-214-760-00 | METAL | 20K | 1% | 1/4W |
| R736 | 1-214-760-00 | METAL | 20K | 1% | 1/4W |
| R737 | 1-214-753-00 | METAL | 10K | 1% | 1/4W |
| R738 | 1-214-753-00 | METAL | 10K | 1% | 1/4W |
| R739 | 1-214-753-00 | METAL | 10K | 1% | 1/4W |
| R740 | 1-214-753-00 | METAL | 10K | 1% | 1/4W |
| R741 | 1-214-753-00 | METAL | 10K | 1% | 1/4W |
| R742 | 1-214-746-00 | METAL | 5.1K | 1% | 1/4W |
| R743 | 1-214-760-00 | METAL | 20K | 1% | 1/4W |
| R744 | 1-231-569-00 | COMPOSITION CIRCUIT BLOCK | | | |
| R745 | 1-231-569-00 | COMPOSITION CIRCUIT BLOCK | | | |
| R746 | 1-231-569-00 | COMPOSITION CIRCUIT BLOCK | | | |
| R747 | 1-231-569-00 | COMPOSITION CIRCUIT BLOCK | | | |
| R801 | 1-214-874-00 | METAL | 2.7K | 1% | 1/2W |
| R802 | 1-214-874-00 | METAL | 2.7K | 1% | 1/2W |
| R812 | 1-214-862-00 | METAL | 820 | 1% | 1/2W |
| R813 | 1-214-862-00 | METAL | 820 | 1% | 1/2W |
| R830 | 1-214-852-61 | METAL | 330 | 1% | 1/2W |
| R831 | 1-214-852-61 | METAL | 330 | 1% | 1/2W |
| R909 | 1-214-170-00 | METAL | 39K | 1% | 1/4W |
| R913 | 1-214-173-00 | METAL | 51K | 1% | 1/4W |
| R914 | 1-214-173-00 | METAL | 51K | 1% | 1/4W |
| R915 | 1-214-140-00 | METAL | 2.2K | 1% | 1/4W |
| R916 | 1-214-174-00 | METAL | 56K | 1% | 1/4W |
| R917 | 1-214-177-00 | METAL | 75K | 1% | 1/4W |
| R918 | 1-214-163-00 | METAL | 20K | 1% | 1/4W |
| R925 | 1-214-134-00 | METAL | 1.2K | 1% | 1/4W |
| R926 | 1-214-124-00 | METAL | 470 | 1% | 1/4W |
| R950 | 1-214-112-00 | METAL | 150 | 1% | 1/4W |

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "♦" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in pF. Common capacitors are omitted. Refer to the following lists for their part numbers.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

COILS

- MMH : mH, UH : μH

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

SEMICONDUCTORS

In each case, U : μ, for example:
 UA... : μA..., UPA... : μPA..., UPC... : μPC,
 UPD... : μPD...

ELECTRICAL PARTS

| Ref.No. | Part No. | Description |
|---------|--------------|-----------------------------------|
| RV101 | 1-224-247-XX | RES, ADJ, METAL GLAZE 100 |
| RV102 | 1-228-508-12 | RES, VAR, CARBON 20K |
| RV103 | 1-224-252-31 | RES, ADJ, METAL GLAZE 10K |
| RV104 | 1-224-550-31 | RES, ADJ, METAL GLAZE 220 |
| RV105 | 1-224-248-31 | RES, ADJ, METAL GLAZE 470 |
| RV106 | 1-224-253-31 | RES, ADJ, METAL GLAZE 22K |
| RV201 | 1-224-247-XX | RES, ADJ, METAL GLAZE 100 |
| RV202 | 1-228-508-12 | RES, VAR, CARBON 20K |
| RV203 | 1-224-252-31 | RES, ADJ, METAL GLAZE 10K |
| RV204 | 1-224-550-31 | RES, ADJ, METAL GLAZE 220 |
| RV205 | 1-224-248-31 | RES, ADJ, METAL GLAZE 470 |
| RV206 | 1-224-253-31 | RES, ADJ, METAL GLAZE 22K |
| RV601 | 1-224-493-00 | RES, ADJ, METAL FILM 10K |
| RV602 | 1-224-490-00 | RES, ADJ, METAL FILM 4.7K |
| RV603 | 1-224-490-00 | RES, ADJ, METAL FILM 4.7K |
| RV604 | 1-224-490-00 | RES, ADJ, METAL FILM 4.7K |
| RY301 | 1-515-445-00 | RELAY |
| RY302 | 1-515-448-00 | RELAY |
| RY303 | 1-515-448-00 | RELAY |
| RY304 | 1-515-448-00 | RELAY |
| RY601 | 1-515-446-00 | RELAY |
| RY602 | 1-515-446-00 | RELAY |
| RY603 | 1-515-460-00 | RELAY |
| S301 | 1-553-254-00 | SWITCH, ROTARY |
| S601 | 1-553-967-00 | SWITCH, TOGGLE |
| S602 | 1-553-967-00 | SWITCH, TOGGLE |
| S603 | 1-553-967-00 | SWITCH, TOGGLE |
| S604 | 1-553-856-00 | SWITCH, KEY BOARD |
| S605 | 1-553-856-00 | SWITCH, KEY BOARD |
| S606 | 1-553-856-00 | SWITCH, KEY BOARD |
| S607 | 1-553-856-00 | SWITCH, KEY BOARD |
| S608 | 1-553-856-00 | SWITCH, KEY BOARD |
| S609 | 1-553-856-00 | SWITCH, KEY BOARD |
| S610 | 1-552-972-21 | SWITCH, SLIDE |
| T201 | 1-426-106-00 | TRANSFORMER, RF |
| T301 | 1-426-106-00 | TRANSFORMER, RF |
| X201 | 1-527-952-00 | VIBRATOR, CRYSTAL |
| X301 | 1-527-948-12 | VIBRATOR, CRYSTAL |
| X501 | 1-527-583-00 | (NTSC).....OSCILLATOR, CRYSTAL |
| X501 | 1-527-788-00 | (PAL/SECAM)...OSCILLATOR, CRYSTAL |
| X502 | 1-527-949-00 | VIBRATOR, CRYSTAL |
| X503 | 1-527-871-00 | OSCILLATOR, LITHIUM TANTALATE |
| X701 | 1-527-532-00 | OSCILLATOR, CERAMIC |

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
MF: μF, PF: μμF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:

UA...: μA..., UPA...: μPA..., UPC...: μPC,

UPD...: μPD...

ELECTROLYTIC CAPACITORS

| RATING → : Use the high voltage rated one. | | | | | | |
|--|-----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| CAP. (μF) | 6.3 VOLT. PART No. | 10 VOLT. PART No. | 16 VOLT. PART No. | 25 VOLT. PART No. | 35 VOLT. PART No. | 50 VOLT. PART No. |
| 0.47 | | | | | → | 1-121-726-00 |
| 1.0 | | | | | → | 1-121-391-00 |
| 2.2 | | | | | → | 1-121-450-00 |
| 3.3 | → | → | → | 1-121-392-00 | → | 1-121-393-00 |
| 4.7 | → | → | → | 1-121-395-00 | → | 1-121-396-00 |
| 10 | → | → | 1-121-651-00 | 1-121-398-00 | → | 1-121-738-00 |
| 22 | → | → | 1-121-479-00 | 1-121-480-00 | 1-121-662-00 | 1-121-152-00 |
| 33 | → | → | 1-121-403-00 | 1-121-404-00 | 1-121-652-00 | 1-121-405-00 |
| 47 | → | 1-121-352-00 | 1-121-409-00 | 1-121-410-00 | 1-121-653-00 | 1-121-411-00 |
| 100 | → | 1-121-414-00 | 1-121-415-00 | 1-121-416-00 | 1-121-357-00 | 1-121-417-00 |
| 220 | 1-121-419-00 | 1-121-420-00 | 1-121-421-00 | 1-121-422-00 | 1-121-261-00 | 1-121-423-00 |
| 330 | 1-121-751-00 | 1-121-805-00 | 1-121-521-00 | 1-121-654-00 | 1-121-655-00 | 1-121-656-00 |
| 470 | 1-121-424-00 | 1-121-425-00 | 1-121-426-00 | 1-121-733-00 | 1-121-361-00 | 1-121-810-00 |
| 1000 | — | 1-121-736-00 | 1-121-245-00 | 1-121-657-00 | 1-121-388-00 | 1-123-061-00 |
| 2200 | 1-121-658-00 | 1-121-659-00 | 1-121-660-00 | 1-123-067-00 | 1-121-984-00 | — |
| 3300 | 1-121-661-00 | 1-123-075-00 | 1-123-071-00 | — | — | — |

| CAP. (μF) | 100 VOLT. PART No. | 160 VOLT. PART No. | 250 VOLT. PART No. | 350 VOLT. PART No. |
|-----------|-----------------------|-----------------------|-----------------------|-----------------------|
| 0.47 | — | — | — | — |
| 1.0 | 1-123-249-00 | 1-123-252-00 | 1-123-003-00 | 1-121-168-00 |
| 2.2 | 1-123-250-00 | 1-123-026-00 | — | 1-123-028-00 |
| 3.3 | 1-121-995-00 | — | 1-123-004-00 | 1-123-006-00 |
| 4.7 | 1-123-255-00 | 1-121-246-00 | 1-121-759-00 | 1-123-007-00 |
| 10 | 1-121-126-00 | 1-121-999-00 | 1-123-254-00 | 1-123-008-00 |
| 22 | 1-121-996-00 | 1-123-253-00 | 1-123-005-00 | 1-123-022-00 |
| 33 | 1-121-997-00 | 1-121-757-00 | — | — |
| 47 | 1-123-251-00 | 1-121-919-00 | — | — |
| 100 | 1-123-084-00 | — | — | — |

CERAMIC CAPACITORS

| RATING | | | | | | | |
|-----------|----------------------|-----------|----------------------|-----------|----------------------|-----------|----------------------|
| CAP. (pF) | 50 VOLT. PART No. | CAP. (pF) | 50 VOLT. PART No. | CAP. (pF) | 50 VOLT. PART No. | CAP. (μF) | 50 VOLT. PART No. |
| 0.5 | 1-101-837-00 | 22 | 1-102-959-00 | 150 | 1-101-361-00 | 0.001 | 1-102-074-00 |
| 0.75 | 1-101-586-00 | 24 | 1-102-960-00 | 160 | 1-101-367-00 | 0.0012 | 1-102-118-00 |
| 1.0 | 1-102-934-00 | 27 | 1-102-961-00 | 180 | 1-102-976-00 | 0.0015 | 1-102-119-00 |
| 1.5 | 1-101-576-00 | 30 | 1-102-962-00 | 200 | 1-102-977-00 | 0.0018 | 1-102-120-00 |
| 2.0 | 1-102-935-00 | 33 | 1-102-963-00 | 220 | 1-102-978-00 | 0.0022 | 1-102-121-00 |
| 3 | 1-102-936-00 | 36 | 1-102-964-00 | 240 | 1-102-979-00 | 0.0027 | 1-102-122-00 |
| 4 | 1-102-937-00 | 39 | 1-102-965-00 | 270 | 1-102-980-00 | 0.0033 | 1-102-123-00 |
| 5 | 1-102-942-00 | 43 | 1-102-966-00 | 300 | 1-102-981-00 | 0.0039 | 1-102-124-00 |
| 6 | 1-102-943-00 | 47 | 1-101-880-00 | 330 | 1-102-820-00 | 0.0047 | 1-102-125-00 |
| 7 | 1-102-944-00 | 51 | 1-101-882-00 | 360 | 1-102-821-00 | 0.0056 | 1-102-126-00 |
| 8 | 1-102-945-00 | 56 | 1-101-884-00 | 390 | 1-102-822-00 | 0.0068 | 1-102-127-00 |
| 9 | 1-102-946-00 | 62 | 1-101-886-00 | 430 | 1-102-823-00 | 0.0082 | 1-102-128-00 |
| 10 | 1-102-947-00 | 68 | 1-101-888-00 | 470 | 1-102-824-00 | 0.01 | 1-102-129-00 |
| 11 | 1-102-948-00 | 75 | 1-101-890-00 | 510 | 1-101-059-00 | 0.022 | 1-101-005-00 |
| 12 | 1-102-949-00 | 82 | 1-102-971-00 | 560 | 1-102-115-00 | 0.047 | 1-101-006-00 |
| 13 | 1-102-950-00 | 91 | 1-102-972-00 | 680 | 1-102-116-00 | | |
| 15 | 1-102-951-00 | 100 | 1-102-973-00 | 820 | 1-102-117-00 | | |
| 16 | 1-102-952-00 | 110 | 1-102-815-00 | | | | |
| 18 | 1-102-953-00 | 120 | 1-102-816-00 | | | | |
| 20 | 1-102-958-00 | 130 | 1-101-081-00 | | | | |

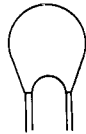
0.001μF = 1,000pF

CERAMIC (SEMICONDUCTOR) CAPACITORS

| RATING → : Use the high voltage rated one. | | | | | |
|--|----------------------|----------------------|-----------|----------------------|----------------------|
| CAP. (μF) | 25 VOLT. PART No. | 50 VOLT. PART No. | CAP. (μF) | 25 VOLT. PART No. | 50 VOLT. PART No. |
| 0.001 | → | 1-161-039-00 | 0.018 | 1-161-016-00 | 1-161-054-00 |
| 0.0012 | → | 1-161-040-00 | 0.022 | 1-161-017-00 | 1-161-055-00 |
| 0.0015 | | 1-161-041-00 | 0.027 | 1-161-018-00 | 1-161-056-00 |
| 0.0018 | | 1-161-042-00 | 0.033 | 1-161-019-00 | 1-161-057-00 |
| 0.0022 | | 1-161-043-00 | 0.039 | 1-161-010-00 | 1-161-058-00 |
| 0.0027 | → | 1-161-044-00 | 0.047 | 1-161-021-00 | 1-161-059-00 |
| 0.0033 | → | 1-161-045-00 | 0.056 | → | 1-161-060-00 |
| 0.0039 | → | 1-161-046-00 | 0.068 | → | 1-161-061-00 |
| 0.0047 | → | 1-161-047-00 | 0.082 | 1-161-024-00 | 1-161-062-00 |
| 0.0056 | → | 1-161-048-00 | 0.1 | 1-161-025-00 | 1-161-063-00 |
| 0.0068 | → | 1-161-049-00 | | | |
| 0.0082 | 1-161-012-00 | 1-161-050-00 | | | |
| 0.01 | 1-161-013-00 | 1-161-051-00 | | | |
| 0.012 | → | 1-161-052-00 | | | |
| 0.015 | 1-161-015-00 | 1-161-053-00 | | | |

MYLAR CAPACITORS

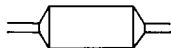
| RATING | | | | | | | | | | | | |
|-----------|--------------|--------------|--------------|-----------|--------------|--------------|--------------|-----------|--------------|--------------|--------------|-----------|
| CAP. (μF) | 50 VOLT. | 100 VOLT. | 200 VOLT. | CAP. (μF) | 50 VOLT. | 100 VOLT. | 200 VOLT. | CAP. (μF) | 50 VOLT. | 100 VOLT. | 200 VOLT. | CAP. (μF) |
| | PART No. | PART No. | PART No. | | PART No. | PART No. | PART No. | | PART No. | PART No. | PART No. | |
| 0.001 | 1-108-227-00 | 1-108-365-00 | 1-108-409-00 | 0.01 | 1-108-239-00 | 1-108-377-00 | 1-108-421-00 | 0.1 | 1-108-251-00 | 1-108-389-00 | 1-108-433-00 | |
| 0.0012 | 1-108-351-00 | 1-108-366-00 | 1-108-410-00 | 0.012 | 1-108-357-00 | 1-108-378-00 | 1-108-422-00 | 0.12 | 1-108-363-00 | 1-108-390-00 | 1-108-434-00 | |
| 0.0015 | 1-108-228-00 | 1-108-367-00 | 1-108-411-00 | 0.015 | 1-108-240-00 | 1-108-379-00 | 1-108-423-00 | 0.15 | 1-108-252-00 | 1-108-391-00 | 1-108-435-00 | |
| 0.0018 | 1-108-352-00 | 1-108-368-00 | 1-108-412-00 | 0.018 | 1-108-358-00 | 1-108-380-00 | 1-108-424-00 | 0.18 | 1-108-364-00 | 1-108-392-00 | 1-108-436-00 | |
| 0.0022 | 1-108-230-00 | 1-108-369-00 | 1-108-413-00 | 0.022 | 1-108-242-00 | 1-108-381-00 | 1-108-425-00 | 0.22 | 1-108-254-00 | 1-108-393-00 | 1-108-437-00 | |
| 0.0027 | 1-108-353-00 | 1-108-370-00 | 1-108-414-00 | 0.027 | 1-108-359-00 | 1-108-382-00 | 1-108-426-00 | 0.27 | 1-108-854-00 | — | — | |
| 0.0033 | 1-108-232-00 | 1-108-371-00 | 1-108-415-00 | 0.033 | 1-108-244-00 | 1-108-383-00 | 1-108-427-00 | 0.33 | 1-108-855-00 | — | — | |
| 0.0039 | 1-108-354-00 | 1-108-372-00 | 1-108-416-00 | 0.039 | 1-108-360-00 | 1-108-384-00 | 1-108-428-00 | 0.39 | 1-108-856-00 | — | — | |
| 0.0047 | 1-108-234-00 | 1-108-373-00 | 1-108-417-00 | 0.047 | 1-108-246-00 | 1-108-385-00 | 1-108-429-00 | 0.47 | 1-108-857-00 | — | — | |
| 0.0056 | 1-108-355-00 | 1-108-374-00 | 1-108-418-00 | 0.056 | 1-108-361-00 | 1-108-386-00 | 1-108-430-00 | | | | | |
| 0.0068 | 1-108-237-00 | 1-108-375-00 | 1-108-419-00 | 0.068 | 1-108-249-00 | 1-108-387-00 | 1-108-431-00 | | | | | |
| 0.0082 | 1-108-356-00 | 1-108-376-00 | 1-108-420-00 | 0.082 | 1-108-362-00 | 1-108-388-00 | 1-108-432-00 | | | | | |



TANTALUM CAPACITORS

| RATING | | | | | | | |
|-------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| → : Use the high voltage rated one. | | | | | | | |
| CAP. (μF) | 3.15 VOLT. | 6.3 VOLT. | 10 VOLT. | 16 VOLT. | 20 VOLT. | 25 VOLT. | 35 VOLT. |
| | PART No. | PART No. | PART No. | PART No. | PART No. | PART No. | PART No. |
| 0.01 | | | | | → | → | 1-131-396-00 |
| 0.015 | | | | | → | → | 1-131-397-00 |
| 0.022 | | | | | → | → | 1-131-398-00 |
| 0.033 | | | | | → | → | 1-131-399-00 |
| 0.047 | | | | | → | → | 1-131-400-00 |
| 0.068 | | | | | → | → | 1-131-401-00 |
| 0.1 | | | | | → | → | 1-131-402-00 |
| 0.15 | | | | | → | → | 1-131-403-00 |
| 0.22 | | | | | → | → | 1-131-404-00 |
| 0.33 | | | | | → | 1-131-409-00 | 1-131-405-00 |
| 0.47 | — | — | — | — | 1-131-412-00 | → | 1-131-406-00 |
| 0.68 | — | — | — | 1-131-415-00 | → | 1-131-410-00 | 1-131-407-00 |
| 1.0 | — | — | 1-131-418-00 | — | 1-131-413-00 | → | 1-131-408-00 |
| 1.5 | — | 1-131-421-00 | — | 1-131-416-00 | → | 1-131-411-00 | 1-131-348-00 |
| 2.2 | 1-131-424-00 | — | 1-131-419-00 | — | 1-131-414-00 | 1-131-355-00 | 1-131-349-00 |
| 3.3 | — | 1-131-422-00 | — | 1-131-417-00 | 1-131-362-00 | 1-131-356-00 | 1-131-350-00 |
| 4.7 | 1-131-425-00 | — | 1-131-420-00 | 1-131-369-00 | 1-131-363-00 | 1-131-357-00 | 1-131-351-00 |
| 6.8 | — | 1-131-423-00 | 1-131-376-00 | 1-131-370-00 | 1-131-364-00 | 1-131-358-00 | 1-131-352-00 |
| 10 | 1-131-426-00 | 1-131-383-00 | 1-131-377-00 | 1-131-371-00 | 1-131-365-00 | 1-131-359-00 | 1-131-353-00 |
| 15 | 1-131-390-00 | 1-131-384-00 | 1-131-378-00 | 1-131-372-00 | 1-131-366-00 | 1-131-360-00 | — |
| 22 | 1-131-391-00 | 1-131-385-00 | 1-131-379-00 | 1-131-373-00 | 1-131-367-00 | | |
| 33 | 1-131-392-00 | 1-131-386-00 | 1-131-380-00 | 1-131-374-00 | | | |
| 47 | 1-131-393-00 | 1-131-387-00 | 1-131-381-00 | — | | | |
| 68 | 1-131-394-00 | 1-131-388-00 | — | — | | | |
| 100 | 1-131-395-00 | — | — | — | | | |

TANTALUM CAPACITORS



| RATING | | | | | | |
|-----------|--------------|--------------|--------------|--------------|--------------|--------------|
| CAP. (μF) | 3 VOLT. | 6.3 VOLT. | 10 VOLT. | 16 VOLT. | 20 VOLT. | 35 VOLT. |
| | PART No. | PART No. | PART No. | PART No. | PART No. | PART No. |
| 0.033 | | | | | | 1-131-273-00 |
| 0.047 | | | | | | 1-131-274-00 |
| 0.068 | | | | | | 1-131-275-00 |
| 0.1 | | | | | | 1-131-276-00 |
| 0.15 | | | | | | 1-131-277-00 |
| 0.22 | | | — | — | 1-131-262-00 | 1-131-278-00 |
| 0.33 | | | — | — | 1-131-263-00 | 1-131-279-00 |
| 0.47 | | | 1-131-169-00 | — | 1-131-264-00 | 1-131-280-00 |
| 0.68 | | | — | 1-131-258-00 | 1-131-265-00 | 1-131-281-00 |
| 1.0 | | | 1-131-254-00 | — | 1-131-266-00 | 1-131-282-00 |
| 1.5 | | 1-131-250-00 | — | — | 1-131-267-00 | 1-131-283-00 |
| 2.2 | | — | — | 1-131-259-00 | 1-131-268-00 | 1-131-284-00 |
| 3.3 | | — | 1-131-255-00 | — | 1-131-269-00 | — |
| 4.7 | | 1-131-251-00 | 1-131-171-00 | — | 1-131-270-00 | — |
| 6.8 | | — | — | 1-131-260-00 | 1-131-271-00 | — |
| 10 | — | — | 1-131-256-00 | — | 1-131-272-00 | — |
| 15 | — | 1-131-252-00 | — | 1-131-261-00 | | |
| 22 | — | — | 1-131-257-00 | — | | |
| 33 | 1-131-176-00 | 1-131-253-00 | 1-131-173-00 | — | | |
| 47 | 1-131-288-00 | 1-131-174-00 | — | — | | |
| 100 | 1-131-177-00 | | | | | |

1/4 WATT CARBON RESISTORS

| Ω | Part No. | Ω | Part No. | Ω | Part No. | Ω | Part No. | Ω | Part No. | Ω | Part No. | Ω | Part No. |
|----------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|--------------|
| 1.0 | 1-246-401-00 | 10 | 1-246-425-00 | 100 | 1-246-449-00 | 1.0k | 1-246-473-00 | 10k | 1-246-497-00 | 100k | 1-246-521-00 | 1.0M | 1-246-545-00 |
| 1.1 | 1-246-402-00 | 11 | 1-246-426-00 | 110 | 1-246-450-00 | 1.1k | 1-246-474-00 | 11k | 1-246-498-00 | 110k | 1-246-522-00 | 1.1M | 1-210-814-00 |
| 1.2 | 1-246-403-00 | 12 | 1-246-427-00 | 120 | 1-246-451-00 | 1.2k | 1-246-475-00 | 12k | 1-246-499-00 | 120k | 1-246-523-00 | 1.2M | 1-210-815-00 |
| 1.3 | 1-246-404-00 | 13 | 1-246-428-00 | 130 | 1-246-452-00 | 1.3k | 1-246-476-00 | 13k | 1-246-500-00 | 130k | 1-246-524-00 | 1.3M | 1-210-816-00 |
| 1.5 | 1-246-405-00 | 15 | 1-246-429-00 | 150 | 1-246-453-00 | 1.5k | 1-246-477-00 | 15k | 1-246-501-00 | 150k | 1-246-525-00 | 1.5M | 1-210-817-00 |
| 1.6 | 1-246-406-00 | 16 | 1-246-430-00 | 160 | 1-246-454-00 | 1.6k | 1-246-478-00 | 16k | 1-246-502-00 | 160k | 1-246-526-00 | 1.6M | 1-210-818-00 |
| 1.8 | 1-246-407-00 | 18 | 1-246-431-00 | 180 | 1-246-455-00 | 1.8k | 1-246-479-00 | 18k | 1-246-503-00 | 180k | 1-246-527-00 | 1.8M | 1-210-819-00 |
| 2.0 | 1-246-408-00 | 20 | 1-246-432-00 | 200 | 1-246-456-00 | 2.0k | 1-246-480-00 | 20k | 1-246-504-00 | 200k | 1-246-528-00 | 2.0M | 1-210-820-00 |
| 2.2 | 1-246-409-00 | 22 | 1-246-433-00 | 220 | 1-246-457-00 | 2.2k | 1-246-481-00 | 22k | 1-246-505-00 | 220k | 1-246-529-00 | 2.2M | 1-210-821-00 |
| 2.4 | 1-246-410-00 | 24 | 1-246-434-00 | 240 | 1-246-458-00 | 2.4k | 1-246-482-00 | 24k | 1-246-506-00 | 240k | 1-246-530-00 | 2.4M | 1-244-754-00 |
| 2.7 | 1-246-411-00 | 27 | 1-246-435-00 | 270 | 1-246-459-00 | 2.7k | 1-246-483-00 | 27k | 1-246-507-00 | 270k | 1-246-531-00 | 2.7M | 1-244-755-00 |
| 3.0 | 1-246-412-00 | 30 | 1-246-436-00 | 300 | 1-246-460-00 | 3.0k | 1-246-484-00 | 30k | 1-246-508-00 | 300k | 1-246-532-00 | 3.0M | 1-244-756-00 |
| 3.3 | 1-246-413-00 | 33 | 1-246-437-00 | 330 | 1-246-461-00 | 3.3k | 1-246-485-00 | 33k | 1-246-509-00 | 330k | 1-246-533-00 | 3.3M | 1-244-757-00 |
| 3.6 | 1-246-414-00 | 36 | 1-246-438-00 | 360 | 1-246-462-00 | 3.6k | 1-246-486-00 | 36k | 1-246-510-00 | 360k | 1-246-534-00 | 3.6M | 1-244-758-00 |
| 3.9 | 1-246-415-00 | 39 | 1-246-439-00 | 390 | 1-246-463-00 | 3.9k | 1-246-487-00 | 39k | 1-246-511-00 | 390k | 1-246-535-00 | 3.9M | 1-244-759-00 |
| 4.3 | 1-246-416-00 | 43 | 1-246-440-00 | 430 | 1-246-464-00 | 4.3k | 1-246-488-00 | 43k | 1-246-512-00 | 430k | 1-246-536-00 | 4.3M | 1-244-760-00 |
| 4.7 | 1-246-417-00 | 47 | 1-246-441-00 | 470 | 1-246-465-00 | 4.7k | 1-246-489-00 | 47k | 1-246-513-00 | 470k | 1-246-537-00 | 4.7M | 1-244-761-00 |
| 5.1 | 1-246-418-00 | 51 | 1-246-442-00 | 510 | 1-246-466-00 | 5.1k | 1-246-490-00 | 51k | 1-246-514-00 | 510k | 1-246-538-00 | 5.1M | 1-244-762-00 |
| 5.6 | 1-246-419-00 | 56 | 1-246-443-00 | 560 | 1-246-467-00 | 5.6k | 1-246-491-00 | 56k | 1-246-515-00 | 560k | 1-246-539-00 | | |
| 6.2 | 1-246-420-00 | 62 | 1-246-444-00 | 620 | 1-246-468-00 | 6.2k | 1-246-492-00 | 62k | 1-246-516-00 | 620k | 1-246-540-00 | | |
| 6.8 | 1-246-421-00 | 68 | 1-246-445-00 | 680 | 1-246-469-00 | 6.8k | 1-246-493-00 | 68k | 1-246-517-00 | 680k | 1-246-541-00 | | |
| 7.5 | 1-246-422-00 | 75 | 1-246-446-00 | 750 | 1-246-470-00 | 7.5k | 1-246-494-00 | 75k | 1-246-518-00 | 750k | 1-246-542-00 | | |
| 8.2 | 1-246-423-00 | 82 | 1-246-447-00 | 820 | 1-246-471-00 | 8.2k | 1-246-495-00 | 82k | 1-246-519-00 | 820k | 1-246-543-00 | | |
| 9.1 | 1-246-424-00 | 91 | 1-246-448-00 | 910 | 1-246-472-00 | 9.1k | 1-246-496-00 | 91k | 1-246-520-00 | 910k | 1-246-544-00 | | |

1/8 WATT CARBON RESISTOR

| Ω | Part No. | Ω | Part No. | Ω | Part No. | Ω | Part No. | Ω | Part No. | Ω | Part No. | Ω | Part No. |
|----------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|--------------|
| 2.0 | — | 13 | 1-246-821-00 | 91 | 1-246-831-00 | 620 | 1-246-841-00 | 4.3k | 1-246-851-00 | 30k | 1-246-861-00 | 200k | 1-246-871-00 |
| 2.2 | 1-246-751-00 | 15 | 1-246-761-00 | 100 | 1-246-771-00 | 680 | 1-246-781-00 | 4.7k | 1-246-791-00 | 33k | 1-246-801-00 | 220k | 1-246-811-00 |
| 2.4 | — | 16 | 1-246-822-00 | 110 | 1-246-832-00 | 750 | 1-246-842-00 | 5.1k | 1-246-852-00 | 36k | 1-246-862-00 | 240k | 1-247-054-00 |
| 2.7 | 1-246-752-00 | 18 | 1-246-762-00 | 120 | 1-246-772-00 | 820 | 1-246-782-00 | 5.6k | 1-246-792-00 | 39k | 1-246-802-00 | 270k | 1-247-046-00 |
| 3.0 | — | 20 | 1-246-823-00 | 130 | 1-246-833-00 | 910 | 1-246-843-00 | 6.2k | 1-246-853-00 | 43k | 1-246-863-00 | 300k | 1-247-055-00 |
| 3.3 | 1-246-753-00 | 22 | 1-246-763-00 | 150 | 1-246-773-00 | 1.0k | 1-246-783-00 | 6.8k | 1-246-793-00 | 47k | 1-246-803-00 | 330k | 1-247-047-00 |
| 3.6 | — | 24 | 1-246-824-00 | 160 | 1-246-834-00 | 1.1k | 1-246-844-00 | 7.5k | 1-246-854-00 | 51k | 1-246-864-00 | 360k | 1-247-056-00 |
| 3.9 | 1-246-754-00 | 27 | 1-246-764-00 | 180 | 1-246-774-00 | 1.2k | 1-246-784-00 | 8.2k | 1-246-794-00 | 56k | 1-246-804-00 | 390k | 1-247-048-00 |
| 4.3 | — | 30 | 1-246-825-00 | 200 | 1-246-835-00 | 1.3k | 1-246-845-00 | 9.1k | 1-246-855-00 | 62k | 1-246-865-00 | 430k | 1-247-057-00 |
| 4.7 | 1-246-755-00 | 33 | 1-246-765-00 | 220 | 1-246-775-00 | 1.5k | 1-246-785-00 | 10k | 1-246-795-00 | 68k | 1-246-805-00 | 470k | 1-247-049-00 |
| 5.1 | — | 36 | 1-246-826-00 | 240 | 1-246-836-00 | 1.6k | 1-246-846-00 | 11k | 1-246-856-00 | 75k | 1-246-866-00 | 510k | 1-247-058-00 |
| 5.6 | 1-246-756-00 | 39 | 1-246-766-00 | 270 | 1-246-776-00 | 1.8k | 1-246-786-00 | 12k | 1-246-796-00 | 82k | 1-246-806-00 | 560k | 1-247-050-00 |
| 6.2 | — | 43 | 1-246-827-00 | 300 | 1-246-837-00 | 2.0k | 1-246-847-00 | 13k | 1-246-857-00 | 91k | 1-246-867-00 | 620k | 1-247-059-00 |
| 6.8 | 1-246-757-00 | 47 | 1-246-767-00 | 330 | 1-246-777-00 | 2.2k | 1-246-787-00 | 15k | 1-246-797-00 | 100k | 1-246-807-00 | 680k | 1-247-051-00 |
| 7.5 | 1-246-818-00 | 51 | 1-246-828-00 | 360 | 1-246-838-00 | 2.4k | 1-246-848-00 | 16k | 1-246-858-00 | 110k | 1-246-868-00 | 750k | 1-247-060-00 |
| 8.2 | 1-246-758-00 | 56 | 1-246-768-00 | 390 | 1-246-778-00 | 2.7k | 1-246-788-00 | 18k | 1-246-798-00 | 120k | 1-246-808-00 | 820k | 1-247-052-00 |
| 9.1 | 1-246-819-00 | 62 | 1-246-829-00 | 430 | 1-246-839-00 | 3.0k | 1-246-849-00 | 20k | 1-246-859-00 | 130k | 1-246-869-00 | 910k | 1-247-061-00 |
| 10 | 1-246-759-00 | 68 | 1-246-769-00 | 470 | 1-246-779-00 | 3.3k | 1-246-789-00 | 22k | 1-246-799-00 | 150k | 1-246-809-00 | 1M | 1-247-053-00 |
| 11 | 1-246-820-00 | 75 | 1-246-830-00 | 510 | 1-246-840-00 | 3.6k | 1-246-850-00 | 24k | 1-246-860-00 | 160k | 1-246-870-00 | | |
| 12 | 1-246-760-00 | 82 | 1-246-770-00 | 560 | 1-246-780-00 | 3.9k | 1-246-790-00 | 27k | 1-246-800-00 | 180k | 1-246-810-00 | | |